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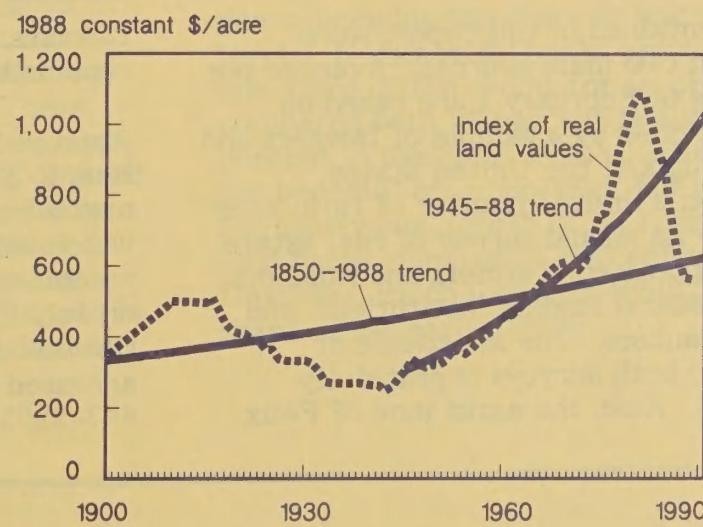
# Agricultural Resources

## Agricultural Land Values and Markets

### Situation and Outlook Report

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#### Trends in Real Land Values



## CONTENTS

### Page

3	Summary
4	Outlook
5	Value of U.S. Farmland Up 3 Percent
12	The Economics of Farmland Values by Karl Gertel
14	Cash Rents Higher in 1988
18	Farmland Transfers
26	Recent Updates in Land Values
30	List of Tables

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Basic data contained in this report were obtained from two main sources. Average per acre values as of February 1 are based on estimates provided by a sample of farmers and ranchers throughout the United States. Information on a limited number of farm sales is provided by an annual survey of real estate brokers and appraisers, farmers and ranchers, officials of Federal lending institutions, and commercial bankers. The assistance of respondents to both surveys is gratefully acknowledged. Also, the assistance of Felix

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Approved by the World Agricultural Outlook Board. Summary released June 15, 1988. The next summary of *Agricultural Resources*, which will feature inputs, particularly farm machinery and energy, is scheduled for release on July 28. Summaries and full Situation and Outlook reports, including tables, may be accessed electronically. For details, call (202) 447-5505.

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## SUMMARY

U.S. farmland values have risen this year for the first time since 1982. The February 1988 value of \$564 per acre was 3 percent above a year earlier, but one-third below the record \$823 in 1982. The real value, however, was down slightly from last year, as the 4-percent inflation rate in 1987 exceeded the nominal increase in land values. The 1988 real value was nearly 50 percent below the 1980 record. Farmland values throughout 1988 and early 1989 are expected to increase at or slightly below the rate of inflation, which is forecast at around 4 percent.

Several factors supported the February 1988 value increase. Net farm income, which has been increasing since 1983, reached a record high in 1987. Nominal interest rates on farm real estate loans averaged lower in 1987, but rose slightly late in the year. Although still high by historical standards, real interest rates were lower in 1986 and 1987. The financial condition of many borrowers and lenders improved in the past 2 years. Farm real estate debt continued to fall in 1987 (20 percent below the 1983 high), which together with higher farm incomes, reduced the percentages of debt to equity and debt to net cash income in 1987. The Conservation Reserve Program has strengthened prices for lower quality cropland in some regions.

Farmland values in 1988 were higher in 6 of 10 production regions. Substantial gains in the Corn Belt (9 percent), the Lake States (7 percent), and the Northern Plains (7 percent) contributed to the national increase. These regions sustained the largest drops when land values began declining in 1982. Strong demand for land for nonagricultural uses helped raise values 9 percent in the Northeast. Values were also higher in the Southeast (6 percent) and in Appalachia (2 percent) but unchanged in the Delta States. Values continued to decline

in western regions, but at lower rates than in the preceding 2 years. Values were down 3 percent in the Southern Plains and 2 percent in the Mountain and Pacific regions.

Cash rents for cropland were generally higher in February 1988, especially in the Northeast, Corn Belt, Southeast, and Delta States. Cash rent as a percent of the value of rented cropland declined in many States as land values increased more than rents. Pasture rents tended to be slightly higher, except in the Mountain region.

Voluntary and estate sales continued to account for the majority of farmland transfers in 1988. Farm owner/operators were involved in 56 percent of all reported purchases, accounting for 64 percent of all acreage sold and 54 percent of the total value of sales. Thirty percent of the buyers were nonfarmers who bought 25 percent of the acreage sold representing 35 percent of the sales value. About 91 percent of farmland sold was expected to remain in agricultural uses 5 years after purchase, while 1 percent was expected to be in forestry and 8 percent in nonagricultural uses.

The 1980's trend in fewer sales being financed continued. Financing was involved in about 70 percent of all reported sales in 1988, compared with 73 percent last year and close to 90 percent in the late 1970's. The percent of debt to purchase price fell to 72 percent in 1988, the first significant drop in several years, bringing the share in line with mid-1960 levels. Commercial banks provided nearly one-third of the credit for reported sales, compared with 28 percent last year and only 4 percent in the early 1980's. Seller financing has become less important, but still accounted for nearly one-fourth of all financing. Federal land banks supplied 25 percent of the financing, much less than their 35-percent share in the early 1980's.

## OUTLOOK

Most signs suggest U.S. farmland values in 1988 and early 1989 will increase modestly at or slightly below the rate of inflation which is forecast at around 4 percent. If realized, changes in nominal and real values would be similar to those during February 1987–February 1988.

Higher values in many areas in 1988 signal renewed confidence in the current land market. But, changes in farm income, interest rates, inflation rates, farm programs, growth of the national economy, and returns on alternate investments will help determine whether recent rates of increase in land values can be sustained over the next year or two and whether current declines in some regions will bottom out and turn around.

Nominal net farm income and returns to land were record high in 1987. Real (inflation-adjusted) net farm income and returns to land were at their highest levels since 1975, but substantially below their peak values. Net cash income in 1988 is forecast to be down slightly from 1987, but net farm income is expected to be about the same. Higher receipts from crops are anticipated to be offset by lower receipts from livestock, reduced Government payments, and slightly higher production expenses. The developing drought in the Midwest and South and continuing drought in the West may have negative effects on income and land values in these areas. The prospects for lower Government payments over the next year or two and the uncertainty surrounding the upcoming 1990 farm bill may dampen expectations about near-term land values.

Real national economic growth in 1988 is currently forecast at just over 3 percent, slightly higher than a year earlier. Nominal interest rates are expected to increase slightly, while real rates may be similar to last year's, although much higher than historical rates. The uncertain direction of the stock market may encourage investment in farmland. Returns to farm equity have increased since 1983 and averaged 4.3 percent in 1987, up from 3.6 percent in 1986. Changes in the 1986 Federal Tax Code eliminated some tax advantages for investments in agriculture.

Foreign investment in farmland has not shown any perceptible increase in recent years.

The financial condition of farm operations and lending institutions should continue to improve. The Agricultural Credit Act of 1987 requires lenders to restructure distressed loans if restructuring is less costly than foreclosing. Stronger financial positions may encourage increased leveraging and more purchases of farmland. The volume of farmland acquired and held by lending institutions through foreclosures is being slowly reduced.

Conservation programs may be having countervailing effects on the value of highly erodible land. Forthcoming enforcement of the requirement to implement adequate conservation practices to maintain eligibility for farm program benefits after January 1, 1990, may place downward pressure on values of land requiring conservation efforts. On the other hand, the Conservation Reserve Program (CRP) has strengthened the values of enrolled acreage. Future land value effects of CRP will partly depend on the level of rents necessary to enroll the CRP goal of 40–45 million acres by 1990.

Results of recent surveys point to expectations of higher land values. Respondents in a May 1 national survey of rural appraisers expect farmland values to increase about 1 percent during May–July 1988 and approximately 3.5 percent during May 1988–May 1989. According to the Federal Reserve Bank of Chicago's April 1 survey of agricultural bankers, "good" farmland in the Chicago district increased 4 percent in value during January–March 1988, compared with 3 percent in the preceding quarter. Higher land values were also reported in first-quarter surveys by the Federal Reserve Banks of Kansas City and Minneapolis. Bankers in the Dallas Federal Reserve district reported a slight improvement in the value of dryland cropland, while values for irrigated cropland and ranch land continued to decline, but at slower rates than in preceding quarters.

Potential participants in land markets thus face a mixture of positive signs and uncertainties. The sharp increases and later drops in farmland values within the past 10 years will likely affect individuals' expectations of future land values.

## VALUE OF U.S. FARMLAND UP 3 PERCENT

The February 1988 value of U.S. farm real estate averaged \$564 per acre (table 1). The 3-percent increase from a year earlier is the first since land values peaked at \$823 per acre in 1982 and declined for the next 5 years. The 1988 value is nearly one-third below the 1982 high.

When the 3-percent nominal increase in farmland value is adjusted for inflation, which averaged about 4 percent in 1987, the real value of U.S. farmland in 1988 was down slightly from last year and nearly 50 percent below the 1980 high.

The double-digit percentage increases in values during the mid- to late 1970's were fueled by optimism about the future of the agricultural economy and by growing inflation rates. Export markets were expanding, farm incomes were high and commodity prices were rising, financing was readily available, and real interest rates averaged just over 1 percent. Higher land values attracted more investors and encouraged more leveraging of financial positions to purchase more land.

Farm debt rose while land values were moving higher. Farm debt-to-equity percentages averaged 19 percent during the 1970's. Debt continued to grow for 3 years after the value of equity reached a record high in 1980. Debt-to-equity percentages increased from 20.1 in 1980 to a record 30.5 in 1985. Real interest rates began rising in 1980 and increased dramatically from under 2 percent in 1980 to 9 percent in 1985. Stocks of domestic commodities substantially increased during this period, commodity prices trended downward, and farm incomes were supported by increasingly higher Government payments. These adverse developments, together with deteriorating financial positions of a growing number of borrowers and lending institutions in 1983-85, furthered pessimism and uncertainty about the future of the agricultural sector. U.S. farmland values fell by one-third during 1982-87, with annual declines during 1984-86 averaging 12 percent. The resulting loss in farm equity increased the

financial vulnerability of many borrowers, leading to distress sales of farmland which drove land values even lower.

Several factors contributed to the higher farmland value in 1988. U.S. nominal net farm income was record high in 1987, and real income was the highest since the mid-1970's. Although still high when compared with rates during the 1960's and 1970's, nominal and real interest rates were lower in 1986 and 1987. The financial positions of many borrowers and lenders improved during the past 2 years. U.S. commodity stocks were worked down, and the export market began growing. Crop and cattle prices began improving in late 1987 and into 1988. The CRP has strengthened values of lower quality cropland in some areas. The CRP's 10-year annuity has helped improve the cash flow and financial position of landowners enrolled in the program.

The total value of farmland and buildings for the 48 States as of February 1988 was \$563 billion, 3 percent higher than a year earlier (table 2). Because the acreage in farms and ranches does not change much from year to year, the percentage changes in total value of farmland and buildings closely parallel changes in per acre values of farmland.

Farm buildings accounted for about 13 percent of the total value of farmland and buildings in 1988 (table 3). Building values as a proportion of total value ranged from 9 percent in the Northern Plains and Southern Plains to 26 percent in the Northeast.

The per farm value of farmland and buildings in the United States averaged nearly \$260,000 in 1988, 3 percent higher than a year earlier (table 4). Highest regional averages were in the Mountain, Pacific, and Southern Plains regions. Arizona and Nevada had the highest State averages, primarily because of large-scale operations which averaged about 4,400 acres in Arizona and nearly 3,700 acres in Nevada in 1987. Per acre values in both States, however, are among the lowest in the country. Farm size in New Jersey averaged only 112 acres, but the high per acre value (\$6,189) brought the State's average value per farm to nearly \$692,200, third highest among the 48 States.

Table 1.--Average per acre value of farmland and buildings, by State, 1982-88 1/

State	As of April 1				As of February 1			Percent change 1987-88
	1982	1983	1984	1985	1986	1987	1988	
Dollars								
Northeast	1,364	1,343	1,414	1,392	1,416	1,607	1,747	9
Maine	680	708	750	856	993	1,082	1,236	14
New Hampshire	1,136	1,174	1,244	1,419	1,646	1,794	2,037	14
Vermont	815	842	893	1,017	1,180	1,286	1,345	5
Massachusetts	1,874	1,963	2,081	2,372	2,752	2,999	3,534	18
Rhode Island	2,729	2,760	2,926	3,335	3,869	4,217	6,240	48
Connecticut	2,610	2,655	2,814	3,208	3,721	4,056	4,914	21
New York	821	817	842	808	824	931	956	3
New Jersey	3,181	3,140	3,234	3,525	3,913	5,321	6,189	16
Pennsylvania	1,513	1,520	1,642	1,510	1,450	1,725	1,819	5
Delaware	1,787	1,829	1,866	1,642	1,757	1,775	1,895	7
Maryland	2,376	2,121	2,185	2,097	1,887	1,831	2,014	10
Lake States	1,234	1,160	1,099	874	702	598	639	7
Michigan	1,278	1,223	1,223	1,052	936	833	853	2
Wisconsin	1,144	1,113	1,046	847	711	626	630	1
Minnesota	1,272	1,165	1,083	823	609	493	563	14
Corn Belt	1,642	1,482	1,414	1,055	903	815	888	9
Ohio	1,629	1,504	1,444	1,126	1,013	942	991	5
Indiana	1,804	1,610	1,594	1,259	1,058	931	983	6
Illinois	2,023	1,837	1,800	1,314	1,143	1,040	1,114	7
Iowa	1,889	1,684	1,499	1,064	841	748	890	19
Missouri	945	856	856	659	606	552	572	4
Northern Plains	547	528	499	383	323	286	306	7
North Dakota	455	439	439	360	317	282	292	4
South Dakota	349	348	338	250	215	178	187	5
Nebraska	730	701	617	444	364	335	366	9
Kansas	628	601	583	466	387	340	368	8
Appalachia	1,083	1,082	1,090	1,005	983	951	972	2
Virginia	1,096	1,125	1,114	1,091	1,146	1,111	1,143	3
West Virginia	723	688	667	554	537	527	542	3
North Carolina	1,297	1,314	1,380	1,242	1,130	1,096	1,062	-3
Kentucky	1,058	1,049	1,007	906	870	791	786	-1
Tennessee	1,040	1,014	1,044	982	992	1,012	1,104	9
Southeast	1,095	1,095	1,094	1,042	999	1,000	1,056	6
South Carolina	980	946	927	899	872	794	874	10
Georgia	926	929	910	865	822	846	865	2
Florida	1,518	1,576	1,608	1,527	1,435	1,464	1,596	9
Alabama	885	826	809	769	761	731	731	0
Delta States	1,135	1,039	1,040	946	797	666	665	0
Mississippi	981	894	939	835	752	654	658	-1
Arkansas	1,096	972	933	849	705	634	645	2
Louisiana	1,414	1,351	1,351	1,256	1,005	734	708	-4
Southern Plains	576	574	614	635	529	471	457	-3
Oklahoma	725	699	699	566	481	428	421	-2
Texas	539	544	593	652	541	482	466	-3
Mountain	325	314	319	286	247	233	227	-2
Montana	271	259	264	222	204	167	164	-2
Idaho	839	814	814	749	644	567	592	4
Wyoming	193	193	197	177	154	151	140	-7
Colorado	451	454	468	435	357	364	364	0
New Mexico	195	178	182	163	134	122	132	8
Arizona	302	289	295	265	231	242	214	-12
Utah	589	560	571	514	478	454	428	-6
Nevada	268	249	254	229	199	211	193	-9
Pacific	1,346	1,357	1,361	1,225	1,107	974	951	-2
Washington	922	933	961	923	812	723	699	-3
Oregon	705	705	698	579	521	479	466	-3
California	1,900	1,918	1,918	1,726	1,571	1,366	1,341	-2
48 States	823	788	782	679	595	547	564	3
Alaska					1,902	1,437	1,322	-8

1/ Current dollars.

Table 2.--Total value of farmland and buildings, by State, 1982-88 1/

State	As of April 1				As of February 1		
	1982	1983	1984	1985	1986	1987	1988
Million dollars							
<b>Northeast</b>	<b>37,922</b>	<b>37,061</b>	<b>38,805</b>	<b>37,414</b>	<b>36,937</b>	<b>41,474</b>	<b>45,083</b>
Maine	1,074	1,104	1,170	1,301	1,509	1,645	1,879
New Hampshire	613	634	678	766	856	933	1,059
Vermont	1,385	1,431	1,517	1,627	1,888	2,057	2,151
Massachusetts	1,293	1,315	1,415	1,613	1,871	2,039	2,403
Rhode Island	205	207	214	243	282	308	455
Connecticut	1,279	1,328	1,351	1,540	1,675	1,785	2,162
New York	7,800	7,762	7,910	7,353	7,170	8,009	8,223
New Jersey	3,245	3,140	3,137	3,314	3,521	4,523	5,260
Pennsylvania	13,314	13,224	14,282	13,137	12,322	14,663	15,462
Delaware	1,179	1,189	1,231	1,067	1,124	1,118	1,194
Maryland	6,534	5,727	5,899	5,452	4,718	4,394	4,834
<b>Lake States</b>	<b>74,402</b>	<b>69,615</b>	<b>65,711</b>	<b>52,004</b>	<b>41,373</b>	<b>35,172</b>	<b>37,552</b>
Michigan	14,569	13,942	13,942	11,993	10,580	9,416	9,639
Wisconsin	21,164	20,257	18,832	14,992	12,522	10,957	11,024
Minnesota	38,669	35,416	32,937	25,019	18,271	14,799	16,889
<b>Corn Belt</b>	<b>207,575</b>	<b>186,820</b>	<b>177,514</b>	<b>132,198</b>	<b>113,021</b>	<b>101,475</b>	<b>110,535</b>
Ohio	26,064	23,914	22,813	17,791	16,012	14,702	15,461
Indiana	30,307	26,726	26,140	20,648	17,344	15,077	15,918
Illinois	58,060	52,722	51,667	37,712	32,809	29,752	31,850
Iowa	63,659	56,751	50,358	35,750	28,243	25,061	29,803
Missouri	29,484	26,707	26,536	20,297	18,613	16,882	17,503
<b>Northern Plains</b>	<b>99,193</b>	<b>95,741</b>	<b>90,120</b>	<b>69,174</b>	<b>58,173</b>	<b>51,473</b>	<b>55,096</b>
North Dakota	18,655	17,999	17,999	14,724	12,894	11,419	11,846
South Dakota	15,530	15,486	15,021	11,125	9,568	7,941	8,333
Nebraska	34,675	33,227	29,117	20,957	17,185	15,810	17,280
Kansas	30,332	29,028	27,983	22,368	18,526	16,304	17,637
<b>Appalachia</b>	<b>57,523</b>	<b>57,029</b>	<b>57,113</b>	<b>52,177</b>	<b>50,697</b>	<b>48,679</b>	<b>49,765</b>
Virginia	10,740	11,025	10,803	10,474	10,997	10,667	10,972
West Virginia	3,108	2,752	2,536	1,994	1,988	1,949	2,004
North Carolina	14,397	14,454	15,177	13,414	12,206	11,840	11,471
Kentucky	15,341	15,211	14,602	13,137	12,612	11,476	11,403
Tennessee	13,936	13,588	13,995	13,159	12,894	12,747	13,914
<b>Southeast</b>	<b>49,173</b>	<b>48,284</b>	<b>47,689</b>	<b>45,316</b>	<b>42,673</b>	<b>42,202</b>	<b>44,579</b>
South Carolina	5,880	5,487	5,192	4,945	4,709	4,126	4,546
Georgia	12,964	12,727	12,291	11,678	10,929	11,003	11,241
Florida	19,886	20,488	20,898	19,851	18,660	19,033	20,750
Alabama	10,443	9,582	9,309	8,844	8,374	8,039	8,042
<b>Delta States</b>	<b>46,402</b>	<b>42,176</b>	<b>41,998</b>	<b>38,043</b>	<b>31,632</b>	<b>25,904</b>	<b>25,876</b>
Mississippi	14,224	12,784	13,330	11,774	10,521	9,023	9,080
Arkansas	17,755	15,746	15,023	13,584	11,063	9,767	9,931
Louisiana	14,423	13,645	13,645	12,686	10,048	7,115	6,865
<b>Southern Plains</b>	<b>98,238</b>	<b>97,944</b>	<b>104,184</b>	<b>107,024</b>	<b>88,392</b>	<b>78,283</b>	<b>76,006</b>
Oklahoma	24,288	23,417	23,067	18,678	15,876	14,130	13,893
Texas	73,951	74,528	81,117	88,346	72,515	64,153	62,113
<b>Mountain</b>	<b>81,605</b>	<b>78,521</b>	<b>79,482</b>	<b>70,776</b>	<b>60,883</b>	<b>56,999</b>	<b>55,700</b>
Montana	16,666	15,877	16,141	13,542	12,438	10,183	9,948
Idaho	12,501	12,129	11,966	10,861	9,147	7,822	8,166
Wyoming	6,755	6,755	6,851	6,160	5,359	5,252	4,877
Colorado	15,875	15,799	16,180	14,964	12,199	12,370	12,386
New Mexico	8,970	8,188	8,315	7,335	5,961	5,425	5,870
Arizona	11,325	10,838	11,054	9,938	8,576	8,957	7,915
Utah	7,127	6,720	6,740	5,962	5,449	5,132	4,840
Nevada	2,385	2,216	2,235	2,015	1,753	1,858	1,698
<b>Pacific</b>	<b>91,271</b>	<b>91,576</b>	<b>91,329</b>	<b>82,068</b>	<b>73,852</b>	<b>64,560</b>	<b>63,073</b>
Washington	15,121	15,208	15,472	14,860	12,996	11,421	11,038
Oregon	12,690	12,690	12,563	10,422	9,328	8,581	8,334
California	63,460	63,678	63,294	56,785	51,529	44,557	43,701
<b>48 States</b>	<b>843,304</b>	<b>804,765</b>	<b>793,946</b>	<b>686,194</b>	<b>597,632</b>	<b>546,223</b>	<b>563,265</b>

1/ Current dollars. Total value estimated by multiplying average per acre value of farmland and buildings times the acreage of land in farms for each State.

Table 3.—Total value of farm buildings, by State, 1982-88 1/

State	As of April 1				As of February 1		
	1982	1983	1984	1985	1986	1987	1988
Million dollars							
<b>Northeast</b>	<b>10,315</b>	<b>10,047</b>	<b>10,425</b>	<b>10,010</b>	<b>9,872</b>	<b>11,005</b>	<b>11,834</b>
Maine	378	385	404	444	510	550	622
New Hampshire	190	194	206	230	255	275	309
Vermont	432	442	463	492	565	610	631
Massachusetts	493	496	529	597	685	739	863
Rhode Island	48	48	49	55	63	68	100
Connecticut	396	407	410	463	498	526	630
New York	2,477	2,440	2,462	2,266	2,187	2,447	2,458
New Jersey	741	710	702	734	790	1,063	1,131
Pennsylvania	3,628	3,567	3,814	3,473	3,225	3,799	3,966
Delaware	214	213	219	188	196	193	204
Maryland	1,319	1,145	1,167	1,068	915	844	919
<b>Lake States</b>	<b>15,020</b>	<b>13,995</b>	<b>13,096</b>	<b>10,338</b>	<b>8,290</b>	<b>7,045</b>	<b>7,334</b>
Michigan	3,227	3,057	3,027	2,578	2,251	1,983	2,010
Wisconsin	5,995	5,680	5,228	4,120	3,407	2,951	2,940
Minnesota	5,799	5,258	4,841	3,640	2,632	2,110	2,384
<b>Corn Belt</b>	<b>23,867</b>	<b>21,269</b>	<b>20,033</b>	<b>14,878</b>	<b>12,655</b>	<b>11,251</b>	<b>12,076</b>
Ohio	4,113	3,736	3,528	2,724	2,427	2,206	2,297
Indiana	4,040	3,527	3,415	2,670	2,221	1,911	1,998
Illinois	4,666	4,195	4,070	2,941	2,533	2,274	2,410
Iowa	6,801	6,002	5,273	3,706	2,898	2,546	2,998
Missouri	4,248	3,809	3,747	2,837	2,576	2,313	2,374
<b>Northern Plains</b>	<b>9,430</b>	<b>9,020</b>	<b>8,447</b>	<b>6,439</b>	<b>5,371</b>	<b>4,690</b>	<b>4,962</b>
North Dakota	1,883	1,799	1,781	1,442	1,250	1,096	1,126
South Dakota	1,690	1,668	1,602	1,174	1,000	822	853
Nebraska	2,855	2,708	2,349	1,674	1,359	1,238	1,339
Kansas	3,003	2,845	2,715	2,148	1,762	1,535	1,644
<b>Appalachia</b>	<b>12,430</b>	<b>12,187</b>	<b>12,080</b>	<b>10,923</b>	<b>10,514</b>	<b>10,001</b>	<b>10,136</b>
Virginia	2,295	2,332	2,262	2,171	2,257	2,168	2,207
West Virginia	756	662	604	470	464	450	459
North Carolina	3,005	2,987	3,105	2,717	2,448	2,351	2,255
Kentucky	3,233	3,173	3,016	2,686	2,553	2,300	2,262
Tennessee	3,141	3,032	3,092	2,878	2,792	2,733	2,953
<b>Southeast</b>	<b>6,948</b>	<b>6,660</b>	<b>6,459</b>	<b>6,077</b>	<b>5,670</b>	<b>5,496</b>	<b>5,694</b>
South Carolina	1,043	964	903	851	802	696	759
Georgia	2,046	1,988	1,901	1,788	1,657	1,651	1,670
Florida	1,813	1,849	1,867	1,756	1,634	1,650	1,781
Alabama	2,047	1,859	1,788	1,682	1,577	1,499	1,484
<b>Delta States</b>	<b>6,157</b>	<b>5,527</b>	<b>5,451</b>	<b>4,879</b>	<b>4,032</b>	<b>3,296</b>	<b>3,265</b>
Mississippi	2,049	1,823	1,882	1,646	1,456	1,236	1,232
Arkansas	2,454	2,154	2,035	1,821	1,469	1,284	1,292
Louisiana	1,654	1,549	1,534	1,411	1,107	776	741
<b>Southern Plains</b>	<b>9,332</b>	<b>9,189</b>	<b>9,628</b>	<b>9,657</b>	<b>7,908</b>	<b>6,936</b>	<b>6,671</b>
Oklahoma	2,809	2,681	2,615	2,096	1,764	1,554	1,513
Texas	6,523	6,508	7,013	7,561	6,144	5,382	5,158
<b>Mountain</b>	<b>8,496</b>	<b>8,099</b>	<b>8,103</b>	<b>7,166</b>	<b>6,088</b>	<b>5,640</b>	<b>5,484</b>
Montana	1,388	1,309	1,318	1,095	995	807	780
Idaho	1,654	1,589	1,552	1,394	1,163	984	1,017
Wyoming	629	623	625	556	479	465	427
Colorado	1,774	1,748	1,772	1,622	1,309	1,314	1,303
New Mexico	879	794	799	698	561	506	542
Arizona	899	852	860	765	654	676	592
Utah	985	919	913	799	723	674	630
Nevada	288	264	264	236	203	213	193
<b>Pacific</b>	<b>11,543</b>	<b>11,465</b>	<b>11,330</b>	<b>10,074</b>	<b>8,951</b>	<b>7,778</b>	<b>7,513</b>
Washington	2,475	2,464	2,482	2,360	2,043	1,778	1,701
Oregon	2,226	2,204	2,160	1,774	1,572	1,432	1,377
California	6,842	6,796	6,688	5,940	5,336	4,568	4,436
<b>48 States</b>	<b>113,540</b>	<b>107,458</b>	<b>105,049</b>	<b>90,442</b>	<b>79,352</b>	<b>73,137</b>	<b>74,969</b>

1/ Current dollars. Values are estimated by multiplying a building-value factor for each State times the respective total value of farmland and buildings. The factors are based on building values as proportions of total value of land and buildings, as reported in the Bureau of Census' 1979 Farm Finance Survey, Special Report AC78-SR-6, July 1982. The factors are slightly reduced from year to year.

Table 4.--Average per farm value of farmland and buildings, by State, 1982-88 1/

State	As of April 1				As of February 1		
	1982	1983	1984	1985	1986	1987	1988
Dollars							
Northeast	224,400	219,000	235,000	232,889	237,459	270,454	293,989
Maine	136,000	136,400	146,300	166,810	193,500	210,915	240,907
New Hampshire	180,400	186,500	199,500	225,371	267,482	291,555	331,031
Vermont	184,700	190,900	207,800	232,457	265,852	285,754	298,813
Massachusetts	212,000	215,600	232,000	268,827	311,839	339,904	400,543
Rhode Island	255,800	258,800	284,800	324,607	376,544	410,433	607,317
Connecticut	297,400	308,700	329,500	384,960	440,678	482,358	584,329
New York	162,500	158,400	168,300	167,109	170,719	197,758	203,038
New Jersey	341,500	330,500	344,700	380,862	429,448	595,150	692,159
Pennsylvania	221,900	224,100	246,200	226,500	218,081	259,517	273,655
Delaware	337,000	339,700	342,000	304,943	351,388	360,626	385,077
Maryland	363,000	318,100	331,400	311,554	277,554	258,449	284,346
Lake States	289,500	274,100	262,800	215,784	176,054	152,922	163,269
Michigan	227,600	217,800	221,300	193,432	176,333	162,348	166,195
Wisconsin	235,200	230,200	219,000	180,625	152,708	136,960	137,795
Minnesota	375,400	347,200	326,100	260,617	196,458	160,861	183,574
Corn Belt	401,500	367,000	357,900	272,573	237,938	220,120	239,772
Ohio	280,300	259,900	253,500	199,897	181,951	175,029	184,060
Indiana	356,600	318,200	318,800	258,095	225,247	209,397	221,081
Illinois	588,300	527,200	549,700	419,020	381,503	354,195	379,166
Iowa	544,100	493,500	445,600	322,076	259,108	234,218	278,532
Missouri	249,900	226,300	226,800	176,497	161,850	148,092	153,537
Northern Plains	466,800	454,800	436,400	343,294	296,799	266,013	284,734
North Dakota	504,200	493,100	507,000	433,059	390,720	351,356	364,496
South Dakota	414,100	418,500	406,000	304,795	265,764	226,886	238,072
Nebraska	550,400	535,900	485,300	355,200	301,484	282,318	308,574
Kansas	404,400	387,000	378,100	310,667	264,668	232,908	251,960
Appalachia	157,000	157,600	160,900	149,505	149,549	144,022	147,234
Virginia	179,000	190,100	192,900	193,956	219,946	213,347	219,449
West Virginia	139,400	120,700	115,300	94,971	94,681	92,788	95,441
North Carolina	167,400	174,100	192,100	176,495	167,211	164,447	159,316
Kentucky	148,900	147,700	144,600	131,370	127,289	115,924	115,182
Tennessee	146,700	143,000	144,300	134,273	134,309	132,780	144,943
Southeast	268,700	271,300	275,700	265,786	257,064	260,508	275,178
South Carolina	189,700	189,200	185,400	179,800	174,406	158,709	174,850
Georgia	227,400	231,400	241,400	233,550	223,046	229,234	234,185
Florida	497,100	512,200	522,400	509,000	478,460	488,029	532,049
Alabama	189,900	177,400	172,400	163,769	164,204	164,070	164,119
Delta States	314,600	293,900	297,900	277,687	239,639	199,263	199,050
Mississippi	268,400	250,700	266,600	245,281	228,717	200,500	201,787
Arkansas	311,500	281,200	273,200	256,302	221,266	199,321	202,670
Louisiana	384,600	373,800	379,000	352,378	279,111	197,639	190,701
Southern Plains	376,400	376,700	400,700	431,548	379,364	340,362	330,460
Oklahoma	332,700	320,800	316,000	263,070	223,610	201,856	198,465
Texas	393,400	398,500	433,800	499,130	447,626	400,959	388,208
Mountain	675,000	635,300	643,600	576,353	501,924	476,179	465,329
Montana	694,400	661,500	675,400	568,992	527,043	437,021	426,970
Idaho	506,100	495,000	486,400	441,484	381,116	340,106	355,037
Wyoming	742,300	734,200	752,800	684,400	608,960	603,641	560,541
Colorado	577,300	585,200	599,200	560,449	458,614	461,580	462,181
New Mexico	640,700	584,900	594,000	531,522	438,326	401,831	434,782
Arizona	1,415,600	1,321,600	1,331,800	1,169,118	997,263	1,066,294	942,284
Utah	509,100	480,000	481,400	428,950	397,768	377,319	355,888
Nevada	822,500	820,800	859,600	806,080	730,510	774,341	707,360
Pacific	577,700	588,900	596,900	532,907	479,561	427,549	417,705
Washington	387,700	400,200	407,200	391,061	341,996	308,695	298,323
Oregon	343,000	338,400	339,500	281,676	252,100	231,932	225,252
California	773,900	796,000	811,500	718,803	652,263	578,658	567,548
48 States	352,000	340,300	341,800	302,361	270,808	251,884	259,743

1/ Current dollars. Average per farm value is estimated by dividing total value of farmland and buildings for each State by the State's number of farms.

## Northeast and Corn Belt Lead Regional Increases

Farmland values in February 1988 were higher in 6 of the Nation's 10 farm production regions. Regions with higher values fell within a band of States from the Northern Plains eastward and southward to include the Southeast region (fig. 1 and 2). The Northeast and Corn Belt led the regional increases with 9-percent gains followed by a 7-percent growth in the Northern Plains and Lake States. Values were 6 percent higher in the Southeast and up 2 percent in Appalachia. The Delta States' value was essentially unchanged from a year earlier, while regional values in the Mountain States and Pacific regions were down 2 percent and down 3 percent in the Southern Plains.

Farmland values in the Northeast have steadily increased since the early 1940's as population growth and higher incomes have expanded the demand for land for urban development, second homes, and other nonagricultural uses. Much of the farmland in

Connecticut, Massachusetts, and Rhode Island, States where value increases during 1987-88 ranged from 18 to 48 percent, has been converted to nonagricultural uses. Increases were more moderate in States with large acreages of farmland. Values were up 3 percent in New York, 5 percent in Pennsylvania, and 10 percent in Maryland.

Values in the Corn Belt, Lake States, and Northern Plains follow a historical pattern different from the Northeast's and for different reasons. Land uses within these regions remain predominately agricultural, and values are closely linked to the well-being of the region's agricultural economies. The growth in regional land values accelerated in 1973, and by the time record values were reached in 1981-82, farmland values had nearly quadrupled their 1973 levels. From 1982 onward (1983 in the Northern Plains), these regions had the largest drops in values. Even with the 1988 increases, values were still nearly 50 percent below peak levels in the Corn Belt and Lake States and 44 percent lower in the Northern Plains.

Figure 1  
**Percent Change in Farmland Value Per Acre, February 1987-88 and Peak Year to February 1988**

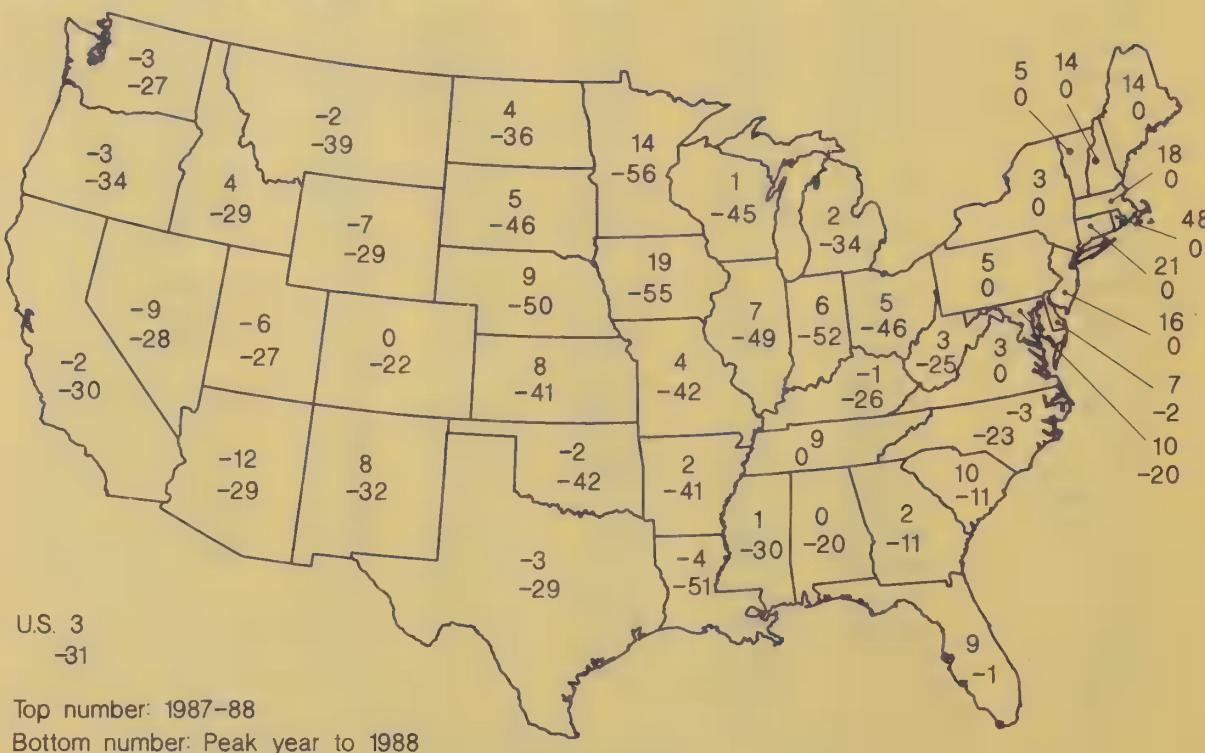
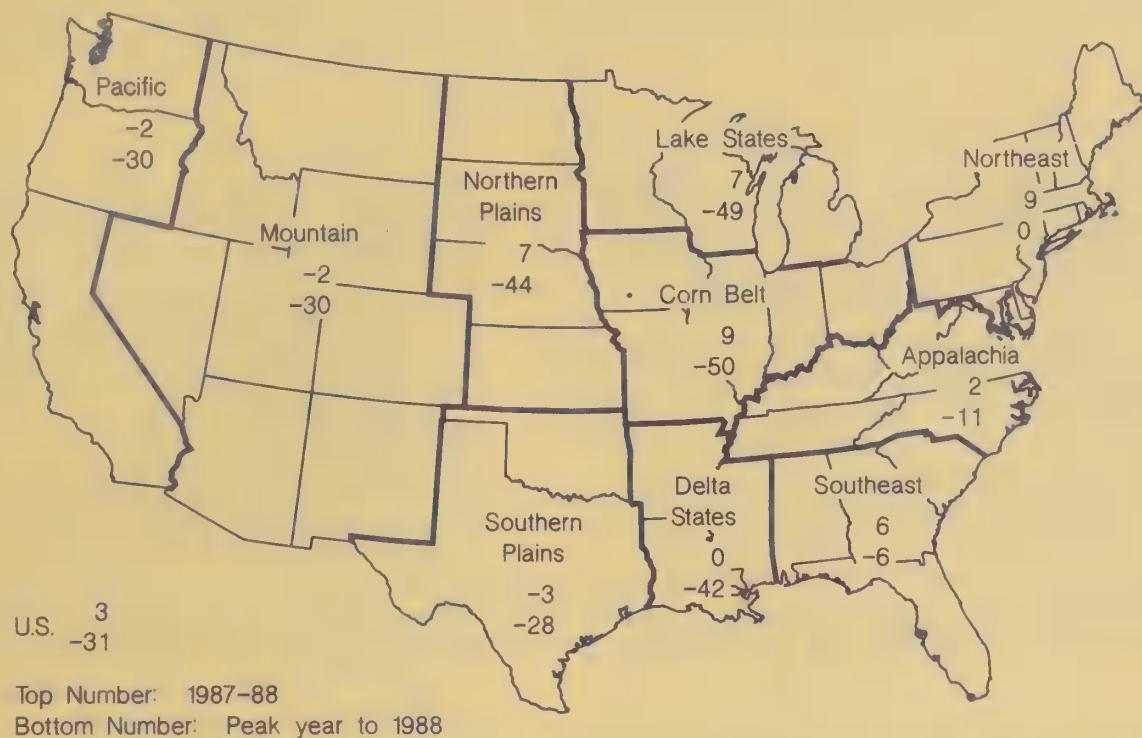


Figure 2

**Percent Change In Farmland Value Per Acre, February 1987-88 and Peak Year to February 1988, by Farm Production Regions**



All Corn Belt States realized higher farmland values in 1988, ranging from a 4-percent increase in Missouri to a 19-percent increase in Iowa. Iowa's huge increase may partly represent a market correction of the relatively large value declines--compared with those in surrounding States--in preceding years. Growth in returns from both crops and livestock, particularly in Iowa, provided a more balanced recovery in farm incomes than in many other regions. The CRP contributed to higher cropland values, especially in Missouri. The Corn Belt accounts for 14 percent of all acreage enrolled in the CRP.

The growth in Lake States values was led by Minnesota's 14-percent increase followed by the modest 1- to 2-percent increases in Michigan and Wisconsin. The increases followed 1986-87 declines which ranged from 11 percent in Michigan to 19 percent in Minnesota. Minnesota's values, like Iowa's, rose very rapidly in the 1970's and fell as quickly around the mid-1980's, while value changes were less volatile in Michigan and Wisconsin. Values in 1988 tended to be higher for all land uses with cropland and pasture values particularly higher in Minnesota. The

State has the third highest enrollment of CRP acreage in the Nation.

State increases were fairly uniform in the Northern Plains, ranging from 4 percent in North Dakota to 9 percent in Nebraska. These upturns represent significant increases from last year when declines ranged from 17 percent in South Dakota to 8 percent in Nebraska. The Northern Plains, like the Corn Belt, realized a more balanced growth in farm income from crops and livestock. Cropland and pasture values were higher in all States, except for pasture in South Dakota. The Northern Plains has nearly one-fourth of the Nation's CRP enrollment.

Farmland values in Appalachia and the Southeast declined only moderately in the 1980's with 1988 values only 11 percent below 1981 record levels. While agriculture continues to be important in both regions, land uses are more varied than, for example, in the Corn Belt and Northern Plains. Demand for land for rural industry and recreational uses and for commuter, retirement, and vacation homes supported land values through the 1980's. Population growth has been high in

## THE ECONOMICS OF FARMLAND VALUES

by

Karl Gertel

The basic approach used by economists to analyze forces affecting farmland values is based on how an investor estimates the maximum bid he or she might offer for a parcel of land. The investor would require that the return to land (income minus production costs, real estate taxes, and labor costs) cover the cost of borrowing money to finance the purchase and the lost opportunity to earn an interest return on equity in the property. Thus, the basic factors affecting land values are the future return to land and an interest rate as it reflects both the cost of borrowed funds and the lost opportunity on equity.

Estimating the bid requires that the investor estimate the future land return. The relationship between expectations about the future return and current values means that the value of land represents the market's current evaluation of future economic conditions in the farm sector.

Most economic studies assume investors form expectations concerning future land returns based on recent returns experience. The return to land summarizes a wide variety of effects including changing technology, farm program payments, input costs, and domestic and international demand for farm commodities. When expectations concerning these underlying factors change quickly, forecasts based on the assumption that the return to land will be similar to the recent past can be misleading.

The accompanying figure shows trends in the real value of farmland and buildings, returns to assets, and real interest rates. Real per acre returns trended upward during 1960-72, while real interest rates were lower. These developments favored an improvement in farmland values. Real farmland values rose

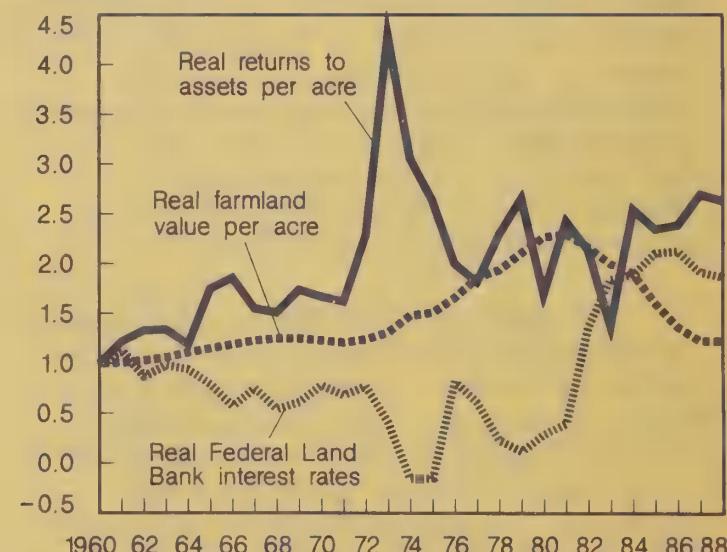
about one-third during this period, a rate of 2.1 percent per year.

After peaking in 1973, real returns steadily declined until 1977, and then exhibited sharp year-to-year fluctuations as U.S. agriculture became more export-oriented and linked more closely with the world economy. Real interest rates fell sharply after 1972 and for farmland borrowers were actually negative in 1974 and 1975. Consequently, the upward trend in real land values during 1973-80 was sustained by low real interest rates, plentiful credit, and optimism resulting from the strong increases in returns in the early 1970's.

The decline in real values beginning in 1981 was likely precipitated by pessimism about expected returns and capital gains, sharply higher real interest rates, and

### Real U.S. Farmland Values, Returns to Farm Assets, and Federal Land Bank Interest Rates

1960=1.0



Farmland includes land and buildings. Real returns to assets and real Federal Land Bank interest rates ■■■ preliminary for 1987 and projected for 1988.

deterioration of the financial position of many farmers, ranchers, and lending institutions. Real interest rates increased fivefold during 1981-85. Returns remained relatively high but fluctuated, contributing to uncertainty about future returns.

In much of the Corn Belt and Northern Plains, high debt to equity levels left farmers unable to obtain credit for additional land purchases, further depressing the demand for land. By 1987, the percentage of cash rents to values of rented cropland ranged from 10 to 11 percent in Iowa and much of the Northern Plains. These high levels and a comparison of values in these States with land of comparable productivity elsewhere suggest that cropland values in much of this area may have fallen farther than justified by prospective returns and interest rates.

these regions, increasing 9 percent during 1980-87 in Appalachia and 16 percent in the Southeast, compared with a 7-percent national increase. The growth in Appalachia's land values was led by a 9-percent increase in Tennessee. Values were modestly lower in North Carolina and Kentucky partly because lower values in relatively urban counties offset value increases in other areas of the States. Generally lower values for irrigated cropland in the Southeast States were more than offset by higher values for dryland cropland and woodland. Changes in State values ranged from no change in Alabama to a 10-percent increase in South Carolina.

The Delta States had nearly identical values in 1987 and 1988 after 16-percent drops in each of the 2 preceding years. Farmland values in Louisiana were down 4 percent as the State's economy continues to recover from the drop in energy prices in 1986 which dampened the demand for land for nonagricultural uses. Higher values for irrigated cropland in Arkansas contributed to the State's 2-percent increase in farmland values in 1988.

The depressed energy sector appears to have continued to reduce the demand for land, including farmland, in the Southern Plains where values averaged 3 percent below a year earlier. This decline, however, was

#### Definitions:

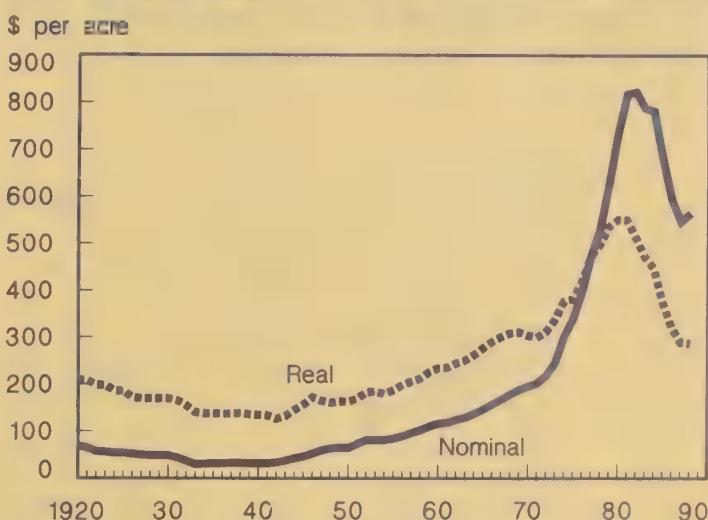
**Land values:** Average U.S. value of farmland and buildings as of February 1, adjusted for inflation.

**Return to assets:** Residual income attributable to land, buildings, and machinery after cash expenses, imputed owner/operator labor, real estate taxes, and other expenses are subtracted. Adjusted to approximate return to land and buildings.

**Interest rate:** The average interest rate of member banks of the Federal Land Bank system minus the inflation rate.

**Returns and interest rates** are preliminary for 1987 and projected for 1988.

Figure 3  
**Average Real and Nominal Per Acre Values of U.S. Farmland**



substantially less than the 11- and 17-percent drops in 1986-87 and 1985-86, respectively. Regional values peaked in 1985, much later than other regions. Higher farmland values in the irrigated and cotton-producing areas of Texas were more than offset by lower values for dryland cropland and pasture in other areas of the State and by lower values in the relatively urban counties. Lower values for dryland cropland and for farmland near relatively urban areas contributed to Oklahoma's 2-percent drop in values. Values were strongest in the State's major wheat-producing areas.

Higher farm incomes, including record receipts from livestock sales, have not yet translated into rising farmland values in the Mountain and Pacific regions. But, some improvement in land values is reflected in a slowing of the rates of decline in preceding years. Portions of the area are currently experiencing a prolonged drought. Values in both regions averaged 2 percent lower in 1988, compared with last year's 6-percent drop in the Mountain region and 12-percent fall in the Pacific region.

Values were lower for all States in the Mountain region, except Idaho and New Mexico, two States with the largest drops in recent years. Over the past year, land values were particularly higher in the irrigated and potato-producing areas of Idaho. Values were higher in the relatively urban counties and in the principal irrigated areas of New Mexico. Higher values in Colorado's major wheat-producing areas were offset by lower values throughout much of the State, leaving the State average essentially unchanged from a year earlier. The CRP likely helped strengthen land values in the wheat-producing areas. Lower values for Arizona pastureland contributed to the State's 12-percent drop in

land values in 1988. Pastureland accounts for 84 percent of the State's land in farms and ranches.

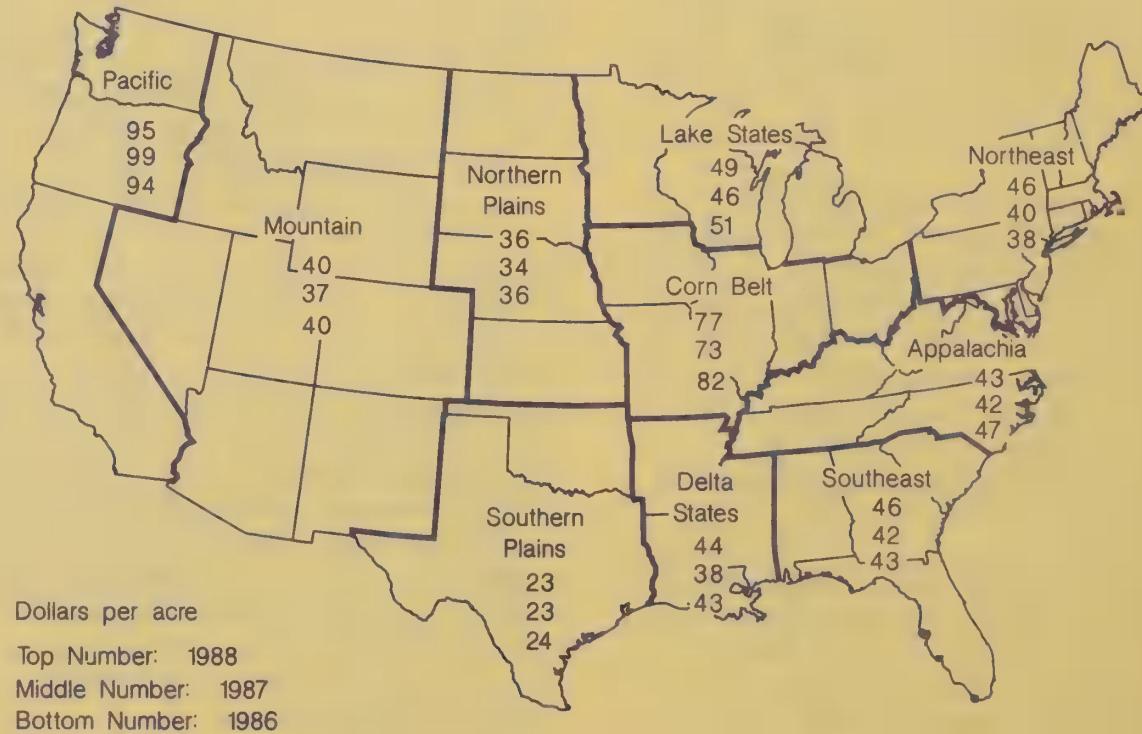
Average farmland values in Washington and Oregon were both down 3 percent, substantially less than the 11- and 8-percent drops, respectively, during 1986-87. Higher values in California's principal cropping areas, particularly for irrigated cropland, were more than offset by lower values in other areas. Farmland values were down 2 percent, much less than last year's 13 percent drop.

#### CASH RENTS HIGHER IN 1988

About 43 percent of all farmland, exclusive of Federal land leased on an animal unit month basis, was rented in 1987, according to ERS' most recent Farm Costs and Returns Survey. Sixty-five percent of all rented land was rented for cash.

Around half of the farmland in the Corn Belt, Northern Plains, Southeast, Delta States, and Pacific regions was leased, compared with one-third in other regions. The percent of rented acreage operated with cash rent leases

Figure 4  
**Cash Rents for Cropland, Per Acre Averages by Region, 1986-88**



ranged from 40 percent in the Corn Belt to over 90 percent in Appalachia and the Northeast.

Cash rents are indicators of the economic returns to farmland. Cash rents in several regions, particularly in the Corn Belt and Northern Plains, didn't begin to fall until around 1985 even though farmland values in most areas began declining in 1982. These lags are partly reflected in higher rent-to-land value percentages during much of the 1980's.

The CRP has taken 25.5 million acres of cropland out of production for 10 years. Because some land was previously rented, the CRP has removed cropland from the rental market which has led to higher rents in some areas. Also, heavy enrollments of base acres in annual commodity programs encourage some operators to seek additional land, and rents may be bid up.

Cash rents for entire farms were generally higher in most States in 1988, and particularly in the Southeast and Delta States (table 5). Rent-to-value percentages in these

Table 5.—Farms rented for cash: Average gross cash rent per acre and rent as a percent of value, selected States, 1985-88 1/

State	Rent per acre				Rent to value			
	1985	1986	1987	1988	1985	1986	1987	1988
Dollars								Percent
<b>Northeast</b>								
Maine	22.70	22.20	30.20	30.40	3.2	4.4	5.6	5.2
Vermont	34.30	■	■	30.10	6.0	■	■	2.7
New York	28.50	26.60	28.80	29.40	4.6	5.2	4.1	4.1
New Jersey	41.70	44.60	58.20	51.70	1.3	1.1	0.8	0.5
Pennsylvania	35.80	34.80	39.30	43.80	2.3	2.4	2.5	2.5
Delaware	63.30	64.00	59.50	55.20	3.6	3.6	3.1	2.9
Maryland	57.50	52.50	49.00	58.50	2.4	3.2	2.5	2.1
<b>Lake States</b>								
Michigan	46.00	43.90	41.50	39.20	5.1	5.5	6.1	5.6
Wisconsin	53.20	43.70	42.40	50.30	6.5	6.7	6.8	7.8
Minnesota	60.00	52.80	48.20	52.10	7.6	9.0	9.1	8.5
<b>Corn Belt</b>								
Ohio	72.20	65.90	58.40	62.00	6.1	6.5	6.0	6.1
Indiana	92.70	83.10	74.30	73.90	7.1	7.7	7.4	7.2
Illinois	103.80	100.10	86.10	83.20	7.1	7.8	7.6	6.8
Iowa	98.40	83.00	75.70	82.10	8.5	9.0	9.3	8.4
Missouri	46.60	42.10	38.60	44.70	8.0	8.2	7.4	8.3
<b>Northern Plains</b>								
North Dakota	25.70	26.90	23.40	25.40	7.4	8.1	7.7	8.1
South Dakota	20.40	20.90	18.40	18.90	8.4	8.4	10.2	8.8
<b>Appalachia</b>								
Virginia	29.40	30.20	30.50	28.70	2.8	3.1	2.6	2.7
West Virginia	19.60	19.30	21.30	21.40	4.4	4.0	4.0	3.5
North Carolina	45.80	35.60	29.60	28.40	3.7	3.4	2.6	2.4
Kentucky	42.00	46.00	43.20	42.90	4.7	5.5	6.2	4.9
Tennessee	35.40	41.20	34.90	34.70	4.1	5.4	4.2	3.8
<b>Southeast</b>								
South Carolina	24.70	22.10	19.80	21.50	3.2	2.8	2.8	2.6
Georgia	28.30	25.40	25.00	26.80	4.5	3.9	3.2	3.5
Alabama	27.10	24.60	23.80	29.30	4.3	3.7	3.8	4.9
<b>Delta States</b>								
Mississippi	37.20	28.50	24.70	30.40	4.9	4.5	4.2	5.6
Arkansas	■	39.70	34.30	35.80	*	5.8	5.8	6.0
Louisiana	47.10	37.90	33.40	36.00	2.8	2.4	3.2	3.7

\* = Insufficient information.

1/ Current dollars. Estimated cash rent as a percent of per acre value of rented farmland.

Table 6.—Cropland rented for cash: Average gross cash rent per acre and rent as a percent of value, selected States, 1985-88 1/

State	Rent per acre				Rent to value			
	1985	1986	1987	1988	1985	1986	1987	1988
Dollars								Percent
Northeast								
Maine	28.70	27.00	31.80	36.90	4.5	5.4	4.1	5.4
Vermont	28.20	26.00	31.30	45.20	4.1	3.0	3.2	3.2
New York	34.80	30.00	32.00	31.30	5.0	5.1	4.2	3.7
New Jersey	43.20	46.00	48.00	61.10	1.1	0.9	0.5	0.6
Pennsylvania	43.00	37.20	40.00	42.70	2.5	2.7	2.5	2.4
Delaware	66.80	64.50	61.40	51.70	3.8	3.7	3.0	2.9
Maryland	63.60	54.50	50.80	50.50	2.7	3.3	2.7	2.0
Lake States								
Michigan	51.10	47.70	41.90	41.70	5.5	5.8	5.9	5.9
Wisconsin	53.10	48.80	44.80	45.40	6.3	7.0	7.3	7.3
Minnesota	62.20	53.80	47.80	52.70	7.8	8.7	9.0	8.5
Corn Belt								
Ohio	72.60	70.30	63.20	65.60	5.4	6.5	5.6	6.3
Indiana	95.70	85.60	77.00	77.00	7.3	7.5	7.5	7.2
Illinois	110.10	99.90	85.70	89.20	7.2	7.7	7.6	7.1
Iowa	102.60	87.60	80.30	86.50	8.4	9.3	9.8	8.6
Missouri	56.50	54.40	48.30	54.70	8.5	9.0	9.1	9.1
Northern Plains								
North Dakota	31.70	29.70	28.20	28.80	7.6	8.1	8.4	8.1
South Dakota	29.40	26.40	25.50	27.10	8.3	9.2	10.0	9.5
Nebraska								
(Nonirrigated)	47.10	46.70	42.30	48.50	8.6	10.4	10.3	10.2
(Irrigated)	92.50	86.30	81.20	85.50	9.6	10.6	11.6	10.5
Kansas								
(Nonirrigated)	32.40	30.30	28.60	30.60	7.2	8.0	7.8	8.3
(Irrigated)	61.50	58.40	59.70	54.10	8.7	9.8	10.4	9.8
Appalachia								
Virginia	37.60	■	37.70	36.20	3.0	■	3.2	2.9
West Virginia	25.30	25.60	31.70	29.70	4.2	4.3	4.2	4.6
North Carolina	41.40	39.50	33.70	34.00	2.0	3.5	2.8	2.6
Kentucky	50.70	53.60	53.30	52.70	5.2	6.0	6.8	6.1
Tennessee	45.80	47.40	39.90	46.60	4.8	5.8	4.8	5.3
Southeast								
South Carolina	27.00	25.50	22.40	23.00	3.5	2.9	3.2	2.9
Georgia	30.30	27.80	26.20	30.70	4.3	3.2	3.9	4.2
Alabama	29.50	29.70	28.50	30.40	4.7	4.3	4.4	4.8
Florida	■	94.60	99.20	106.90	■	2.6	3.1	3.0
Delta States								
Mississippi	41.00	35.00	31.20	36.30	5.2	5.1	5.0	5.8
Arkansas	51.00	48.20	44.40	50.40	6.4	6.5	6.5	7.2
Louisiana	50.40	45.10	36.50	44.60	3.2	2.7	3.6	4.8
Southern Plains								
Oklahoma								
(Nonirrigated)	28.50	26.50	23.00	24.30	4.2	4.7	4.8	5.3
(Irrigated)	39.60	■	37.20	33.70	5.0	■	8.3	6.8
Texas								
(Nonirrigated)	21.30	20.20	19.90	20.50	1.9	2.2	2.3	2.5
(Irrigated)	43.60	39.60	40.60	41.10	4.6	5.1	5.4	4.8
Mountain								
Montana								
(Nonirrigated)	20.30	22.20	21.70	20.30	2.9	8.4	10.1	7.8
(Irrigated)	61.60	55.90	41.70	42.00	3.6	6.6	6.1	5.6
Idaho								
(Nonirrigated)	32.50	32.40	34.10	30.80	5.7	6.0	7.6	6.7
(Irrigated)	106.60	85.40	77.80	91.20	6.8	7.7	7.9	8.5
Wyoming								
(Nonirrigated)	21.40	13.80	11.20	12.00	7.8	6.9	7.8	7.8
(Irrigated)	55.90	47.50	42.50	42.50	3.1	7.2	7.0	8.7
Colorado								
(Nonirrigated)	33.10	22.80	21.10	24.30	7.1	6.0	5.5	4.7
(Irrigated)	82.20	63.40	59.10	63.80	6.3	6.0	6.6	6.7
New Mexico								
(Irrigated)	80.70	79.80	69.80	74.40	3.4	3.0	2.7	2.3
Arizona								
(Irrigated)	142.80	134.30	124.10	146.40	1.4	1.1	1.3	1.4
Utah								
(Nonirrigated)	35.30	25.40	23.50	25.80	2.5	2.3	3.3	3.3
(Irrigated)	61.30	63.70	54.60	54.30	2.0	2.4	2.9	2.8
Nevada								
(Irrigated)	82.90	62.80	80.00	77.40	5.5	4.6	4.9	5.0
Pacific								
Washington								
(Nonirrigated)	61.00	42.40	42.60	42.30	5.3	4.5	5.4	5.7
(Irrigated)	■	118.30	96.60	89.70	■	7.4	7.3	5.1
Oregon								
(Nonirrigated)	50.30	50.70	49.70	42.20	4.1	6.6	5.7	4.4
(Irrigated)	122.40	96.00	88.10	81.50	7.6	7.6	6.2	5.8
California								
(Irrigated)	179.40	152.50	160.20	166.80	4.1	4.0	3.3	3.9

■ = Insufficient information.

1/ Current dollars. Estimated cash rent ■ = percent of per acre value of rented cropland.

Table 7.--Pasture rented for cash: Average gross cash rent per acre and rent as a percent of value, selected States, 1985-88 1/

State	Rent per acre				Rent to value			
	1985	1986	1987	1988	1985	1986	1987	1988
	Dollars				Percent			
<b>Northeast</b>								
Maine	16.30	*	16.30	21.40	4.7	*	2.2	4.3
Vermont	17.00	*	14.40	19.00	3.8	*	2.7	2.0
New York	15.90	17.90	14.40	16.50	4.9	5.7	3.5	3.7
Pennsylvania	19.70	18.00	18.60	19.90	2.2	2.2	1.9	1.9
Delaware	45.30	35.90	43.20	34.40	3.6	2.6	3.4	3.3
Maryland	27.90	24.30	32.10	31.90	1.8	2.0	1.8	2.0
<b>Lake States</b>								
Michigan	16.10	17.80	17.50	15.90	1.5	4.2	4.1	3.5
Wisconsin	23.20	22.00	20.20	21.40	5.9	6.7	7.2	7.2
Minnesota	19.10	16.00	14.50	18.10	5.4	6.4	7.0	7.2
<b>Corn Belt</b>								
Ohio	25.90	24.90	25.10	28.40	4.2	4.9	5.3	4.7
Indiana	36.50	35.60	35.70	31.30	5.5	5.8	6.4	5.8
Illinois	34.30	31.90	27.70	28.60	5.8	6.2	6.1	6.3
Iowa	36.00	29.20	28.10	28.80	7.6	7.7	8.5	8.6
Missouri	18.90	22.00	19.40	22.70	4.9	6.2	5.4	6.0
<b>Northern Plains</b>								
North Dakota	9.00	7.80	7.80	8.50	5.6	5.8	6.7	6.6
South Dakota	8.10	7.30	6.30	6.40	7.3	7.5	8.7	8.3
Nebraska	12.40	8.90	9.80	11.40	8.5	7.6	9.4	10.9
Kansas	13.10	13.20	10.80	11.80	4.5	5.9	5.5	5.5
<b>Appalachia</b>								
Virginia	22.30	20.00	22.80	20.40	2.5	2.7	2.8	2.4
West Virginia	12.70	15.90	14.80	14.00	2.9	4.0	3.0	3.2
North Carolina	21.40	20.60	19.20	20.70	2.0	1.9	1.7	1.9
Kentucky	27.80	24.80	24.30	27.50	3.8	4.2	4.4	4.7
Tennessee	23.50	23.60	21.60	22.70	3.9	4.2	3.0	3.3
<b>Southeast</b>								
South Carolina	17.00	16.10	15.60	17.60	2.7	2.4	2.3	2.2
Georgia	21.00	19.40	19.20	20.80	3.2	3.2	2.9	2.9
Florida	*	20.60	32.30	25.20	*	1.2	1.5	0.9
Alabama	16.60	17.10	17.10	18.60	3.7	3.3	3.5	3.8
<b>Delta States</b>								
Mississippi	19.10	14.00	12.80	14.70	3.2	2.7	2.4	3.4
Arkansas	*	17.60	14.10	16.00	*	3.4	3.1	3.7
Louisiana	22.40	18.40	17.20	14.70	1.4	1.2	2.0	1.8
<b>Southern Plains</b>								
Oklahoma	12.00	12.90	10.20	10.40	2.6	3.4	3.0	3.3
Texas	8.30	7.80	7.70	7.80	0.9	1.0	1.0	1.2
<b>Mountain</b>								
Montana	6.00	4.80	5.20	4.20	2.5	4.1	5.0	3.3
Idaho	15.40	13.80	16.20	16.10	7.4	4.3	4.5	6.3
Wyoming	5.10	5.80	5.20	4.50	1.4	5.8	5.2	5.9
Colorado	12.10	9.90	8.30	9.30	1.9	5.3	3.5	3.1
Utah	20.90	23.20	18.30	17.10	1.5	1.9	2.5	2.3
<b>Pacific</b>								
Washington	40.60	30.80	23.60	32.40	2.9	6.0	3.3	4.9
Oregon	*	21.20	16.10	14.50	*	7.7	4.7	4.8
California	29.20	*	30.30	33.80	0.8	*	0.9	1.4

\* = Insufficient information.

1/ Current dollars. Estimated cash rent as a percent of per acre value of rented pasture.

regions tended to be higher as rent increases were larger than farmland value increases. Higher rents in the Lake States and Corn Belt were more than offset by higher land values resulting in lower rent-to-value percentages except for Wisconsin and Missouri. These 2 States had relatively small increases in land values in 1988.

Cash rents for cropland averaged higher, except in the Southern Plains and Pacific regions (fig. 4). Corn Belt rents had held up until declining during 1985-87 (table 6). Farmland values began falling in 1982. Illinois and Iowa cropland was renting around \$119 per acre in 1982 compared with \$89.20 and \$86.30, respectively in 1988. Rent-to-value percentages for Corn Belt States were close to 5.0 in 1982 (6.3 for Missouri) suggesting that the currently high percentages, ranging from 6.3 for Ohio and 9.1 for Missouri, reflect an underpricing of cropland in the Corn Belt. Rent-to-value percentages in the Northern Plains and Delta States are also high compared to 1982 levels. Rents in Appalachia and the Southeast generally declined along with farmland values so that 1988 rent-to-value

percentages for States in these regions, except North Carolina, are generally similar to 1982 percentages. With greater variability in rents and land values in the Southern Plains, Mountain States, and Pacific regions, the patterns of change are less clear than in other regions.

Pasture rents have been relatively more stable and tended to be slightly higher in 1988 (table 7). Current rents and rent-to-value percentages for the Southern Plains' large acreages of pasture and rangeland are about the same as the early 1980's. Rents in the Lake States, Corn Belt, and Northern Plains are also similar to preceding years; however, the 1988 rent-to-value percentages are substantially higher, indicating that pasture values are low relative to those in the early 1980's. Except for Colorado, rents in the Mountain region were lower in 1988. Much of the region is currently having a severe drought. Changes in cattle grazing fees for privately owned nonirrigated land leased on an animal unit month basis in the Plains and western States were mixed (table 8). Largest increases occurred in Nevada and Arizona, while largest declines were in Wyoming and Oregon.

Table 8.—Cattle grazing rates on privately owned nonirrigated land, 1985-87

State	1985	1986	1987
Dollars per animal unit month			
Arizona	1/	5.82	7.19
California	8.21	7.93	8.46
Colorado	8.49	8.28	8.27
Idaho	6.97	7.51	6.60
Kansas	10.36	8.17	8.87
Montana	8.80	8.30	7.94
Nebraska	11.25	9.75	10.29
Nevada	1/	2.95	7.31
New Mexico	5.77	5.98	5.82
North Dakota	6.97	7.63	7.41
Oklahoma	6.52	5.08	5.68
Oregon	8.57	7.69	5.91
South Dakota	9.10	9.19	8.61
Texas	7.92	8.79	8.30
Utah	9.94	5.34	5.98
Washington	8.07	9.77	9.55
Wyoming	9.64	8.31	6.31
16-State average 2/	9.06	8.33	8.09

1/ Insufficient number of reports for an accurate estimate of grazing rates. 2/ All States except Texas.

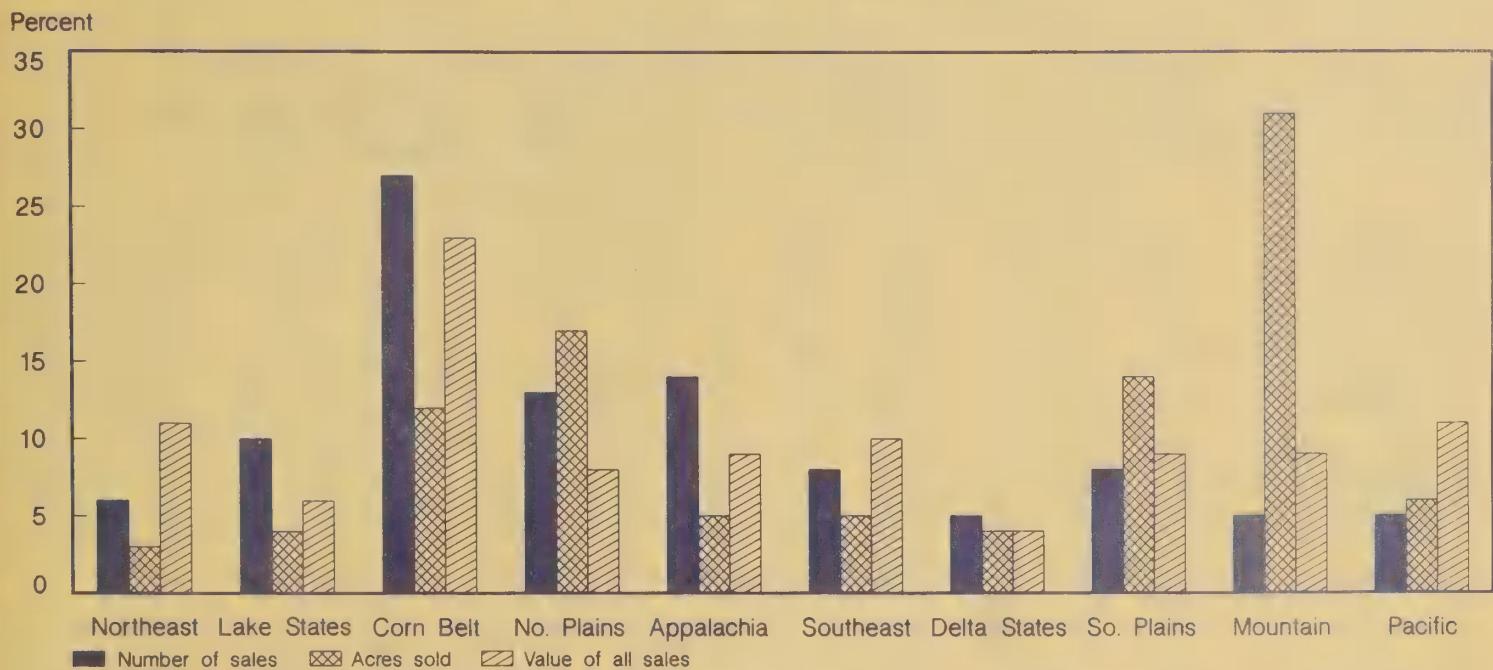
Source: USDA, NASS. Agricultural Prices. PR 1 (12-17). Dec 31, 1987.

## FARMLAND TRANSFERS

The Farmland Market Survey of real estate brokers and appraisers, commercial bankers, officials of Federal lending institutions, farmers, and ranchers provides information on the acreage, value, and terms of recent farm and ranch sales. Data on types of buyers and sellers and the probable use of the land 5 years after the sale is also furnished. Respondents were asked for details on up to five of the most recent voluntary and estate sales of 10 acres or more completed in their county between September 1, 1987 and February 1, 1988. Participants in the 1988 survey reported details on nearly 7,150 sales involving close to 2.3 million acres. According to the 1988 survey, sales activity was higher than a year earlier.

The Northeast accounted for 3 percent of all acreage sold, but 11 percent of the value of all sales (fig. 5). Relatively small tracts were sold at high prices. The Mountain region, on the other hand, with 5 percent of the sales accounted for 31 percent of all acres sold and

Figure 5  
**Distribution of Sales, Acreage Sold, and Value of All Sales, by Region, 1988**



only 9 percent of the total sales value. Several transactions involved large tracts of rangeland sold at relatively low prices.

#### Owner-operators Most Frequent Buyers

Farm owner-operators, including part-owners, continue to represent the largest purchasers of farmland. In 1988, owner-operators accounted for 56 percent of all reported purchases, 64 percent of all acreage sold, and 54 percent of the total sales value (table 9). The 1988 percentages are comparable with those in preceding years. Owner-operators were particularly prevalent buyers in the Mountain (70 percent), Northern Plains (67 percent), and Pacific (62 percent) regions. Nonfarmers, who constituted 30 percent of all purchasers, were especially active in the Southeast (51 percent), Appalachia (42 percent), and the Northeast (39 percent), regions with stronger demand for land for nonagricultural uses.

While the percentage distribution of acres bought among buyer types has remained fairly stable at the national level, sizable changes have occurred within some regions. Between 1987 and 1988, tenants accounted for significantly higher percentages of acreage

purchased in the Northeast, Lake States, Northern Plains, and Southern Plains. In 1988, nonfarmers bought 55 percent of the acreage in the Southeast, compared with 42 percent a year earlier. Owner-operators in the Delta States and Pacific region substantially increased their 1988 shares, as regional shares by nonfarmers dropped.

The combination of higher prices and increased activity by nonfarmers is especially evident in the Northeast, where nonfarmers purchased 37 percent of the acreage sold which accounted for 57 percent of the region's total sales value. Similarly, nonfarmers in the Southeast purchased 55 percent of the acreage sold, representing 64 percent of the total sales value.

#### More Sales by Nonfarmers

Sales by nonfarmers and nonfarm businesses have increased in recent years, growing from 22 percent of the reported national total in 1986 to 31 percent in 1988 (table 10). Activity was particularly higher in the Delta States (38 percent) and the Pacific region (40 percent) while sales by Delta States farmers who either retired or quit were down, and sales by Pacific region farmers who remained in farming were down. This "pattern" did not occur in the Northeast,

Table 9.--Farmland buyers: Percentage of purchases, acres, and value by type of buyer, 1986-88 1/

Region	Buyer											
	Tenant			Owner-operator 2/			Retired farmer			Nonfarmer		
	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988
Percentage of purchases												
Northeast	10	10	17	51	48	44	1	1	1	38	41	39
Lake States	10	16	20	59	58	53	2	1	1	29	25	26
Corn Belt	11	11	12	61	58	58	3	4	2	25	27	28
Northern Plains	12	12	13	70	69	67	2	2	2	16	16	18
Appalachia	8	9	8	49	47	48	2	2	1	41	42	42
Southeast	3	3	4	49	45	44	1	1	1	48	50	51
Delta States	10	12	10	57	47	53	1	3	4	32	38	35
Southern Plains	4	12	13	56	47	53	4	4	2	33	37	31
Mountain	12	5	10	69	69	70	1	2	1	17	23	20
Pacific	11	5	13	53	65	62	3	2	1	32	28	25
All States	10	10	12	58	56	56	2	3	2	30	31	30
Percentage of acres												
Northeast	10	11	22	57	49	41	1	1	1	32	39	37
Lake States	14	17	23	56	59	52	2	1	1	29	23	25
Corn Belt	11	10	12	58	53	57	3	3	2	28	34	29
Northern Plains	9	9	16	63	71	63	1	1	1	26	18	20
Appalachia	7	8	8	53	52	51	2	1	*	38	40	41
Southeast	2	3	2	55	55	42	*	*	*	43	42	55
Delta States	10	5	10	66	42	54	1	2	2	24	51	36
Southern Plains	4	7	14	55	64	54	3	2	2	37	27	30
Mountain	10	3	4	83	69	78	*	1	1	7	27	16
Pacific	6	6	4	63	48	80	4	2	*	27	43	16
All States	8	8	10	65	60	64	2	1	1	25	31	25
Percentage of value												
Northeast	8	7	11	49	47	32	*	1	*	43	46	57
Lake States	12	18	23	60	60	52	2	1	1	26	21	24
Corn Belt	12	10	11	59	59	57	4	4	2	25	27	30
Northern Plains	11	11	12	63	72	68	3	2	1	23	15	19
Appalachia	6	6	8	54	49	50	1	1	1	39	44	41
Southeast	2	2	3	47	52	33	*	*	*	50	46	64
Delta States	11	7	9	67	43	55	1	1	2	21	49	34
Southern Plains	4	7	13	46	45	45	4	2	3	46	46	39
Mountain	8	2	5	69	61	78	1	2	1	22	35	17
Pacific	6	6	6	62	65	72	3	2	*	29	27	22
All States	8	7	10	58	56	54	2	2	1	32	35	35

\* = Less than 0.5 percent.

1/ Percentages may not add to 100 because of rounding. Based on reported sales during the 5 months ending February 1, 1986-88. 2/ Includes part-and full-owner operators.

Table 10.--Farmland sellers: Percentage of sales, acres, and value by type of seller, 1986-88 1/

Region	Type of seller														
	Estate			Remained in farming			Retired or quit			Retired farmer			Nonfarmer/nonfarm business		
	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988
Percentage of sales															
Northeast	8	13	11	18	25	26	29	27	28	19	14	15	27	21	20
Lake States	12	12	11	21	20	16	23	20	23	17	14	14	27	34	35
Corn Belt	24	25	23	22	19	18	21	18	17	12	12	12	20	26	31
Northern Plains	20	22	20	26	22	18	22	16	19	13	13	12	18	27	31
Appalachia	25	20	25	22	22	22	23	22	19	9	10	10	20	26	24
Southeast	12	12	11	27	25	30	21	22	16	10	11	7	30	29	36
Delta States	11	11	10	28	30	28	25	24	13	11	9	10	24	26	38
Southern Plains	16	16	20	36	30	27	16	13	15	11	10	10	23	33	28
Mountain	10	13	10	44	32	27	21	16	22	8	11	9	17	27	32
Pacific	7	9	10	37	38	22	21	9	19	10	13	9	26	30	40
48 States	18	18	18	26	24	22	22	19	18	12	12	11	22	28	31
Percentage of acres															
Northeast	7	13	10	17	21	27	36	34	30	15	13	15	25	18	18
Lake States	14	13	11	18	17	16	27	21	26	17	13	12	24	36	36
Corn Belt	24	20	20	21	17	20	23	18	18	12	12	10	20	33	33
Northern Plains	12	19	20	26	27	20	32	15	23	11	9	10	18	30	26
Appalachia	27	20	26	21	20	22	25	28	20	7	9	10	20	24	22
Southeast	11	16	7	22	24	35	22	24	12	11	6	10	34	30	36
Delta States	9	13	13	22	37	23	26	12	9	6	4	5	37	33	56
Southern Plains	22	32	18	32	31	28	20	11	22	6	5	5	19	21	26
Mountain	6	19	19	37	29	25	30	10	30	4	10	2	22	32	23
Pacific	13	6	10	33	30	24	26	6	18	6	21	5	22	37	43
48 States	15	18	17	28	25	24	27	16	23	9	10	7	22	30	29
Percentage of value															
Northeast	10	18	12	16	27	40	31	29	23	15	9	8	29	17	17
Lake States	11	13	12	24	17	15	30	22	25	16	15	13	19	34	34
Corn Belt	27	25	23	21	19	22	21	16	17	11	13	10	20	27	28
Northern Plains	15	20	22	26	26	21	25	17	20	11	12	11	23	26	27
Appalachia	27	17	29	30	21	25	23	25	20	5	6	10	15	30	17
Southeast	9	13	6	36	40	47	21	23	15	7	4	5	26	21	28
Delta States	8	9	7	26	41	28	26	14	10	5	4	6	34	33	49
Southern Plains	18	16	18	29	35	29	15	14	16	4	6	6	34	28	30
Mountain	6	13	9	49	52	26	20	10	32	4	7	4	21	18	30
Pacific	10	11	13	40	46	33	20	8	20	11	4	4	19	30	31
48 States	16	16	16	30	32	29	22	18	20	9	9	8	23	25	28

1/ Percentage may not add to 100 because of rounding. Based on reported sales during the 5 months ending February 1, 1986-88.

where active farmers continuing to farm have accounted for a higher percentage of sales in recent years while the share by nonfarmers has dropped off.

The percentage distributions of sales, acres sold, and values of sales among seller groups are generally similar at both regional and national levels. Sales by active farmers, for example, accounted for 40 percent of all reported sales in 1988, 47 percent of the acreage sold, and 49 percent of the total value of sales.

Acres Per Sale Higher  
but Price Lower

Acres per reported sale in 1988 averaged 317 at the U.S. level, substantially higher than

in preceding years, while the price per acre averaged \$566, compared with \$607 a year earlier (Table 11). The higher average acreage per sale partly results from several sales of large tracts, presumably rangeland, in the Mountain region and the Southern Plains. These regions accounted for 13 percent of the reported sales but 45 percent of the acreage sold. Per acre prices in both regions were substantially below last year's, reflecting the continued decline in farmland values and several large sales of relatively low-priced rangeland.

Per acre prices in 1988 were much higher in the Southeast, Corn Belt, and Northeast. Acreages per reported sale were relatively low in these regions, ranging from about 140 acres in the Corn Belt and Northeast to 194 acres in the Southeast.

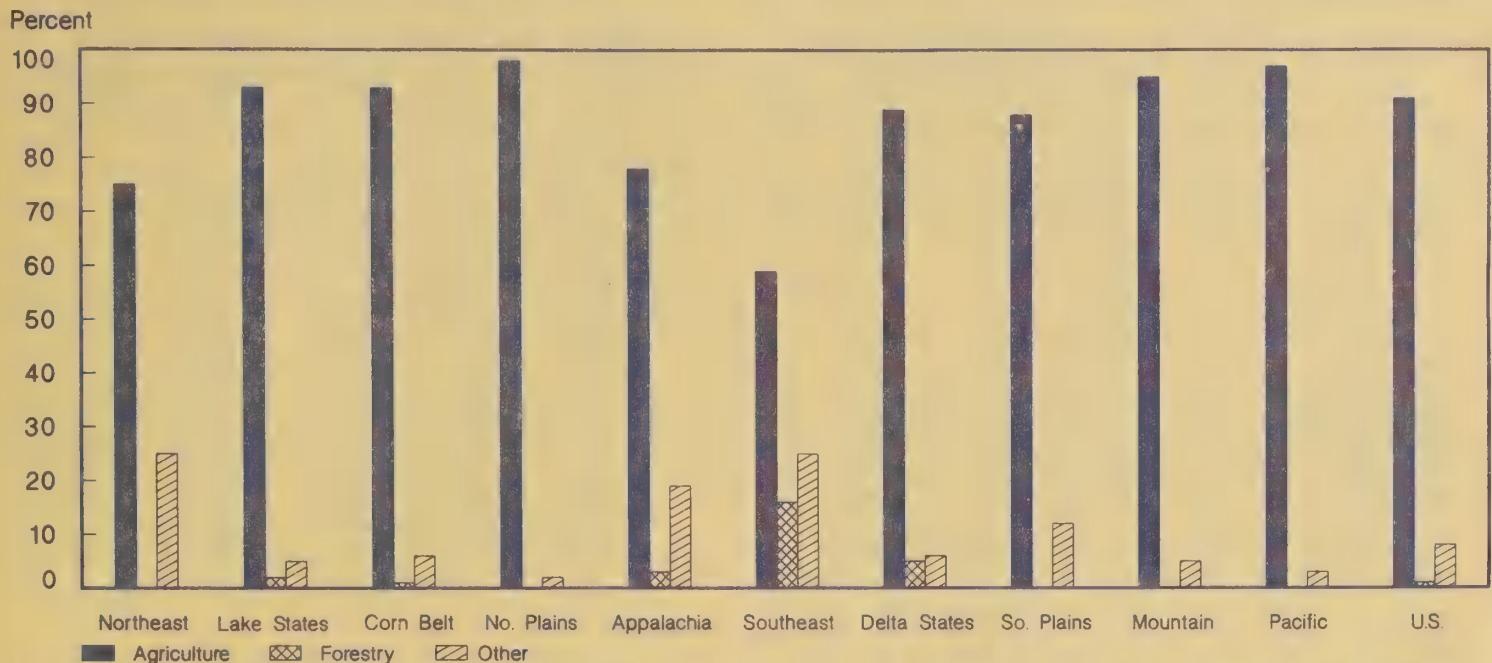
Table 11.—Farmland transfers: Average acres per sale and price per acre, by region, 1981-88 1/

Region	1981	1982	1983	1984	1985	1986	1987	1988
Acres per sale								
Northeast	140	131	114	143	132	138	138	141
Lake States	164	154	126	147	129	121	140	144
Corn Belt	132	125	127	133	127	129	134	142
Northern Plains	338	314	307	270	297	387	323	403
Appalachia	136	102	105	112	110	123	131	115
Southeast	194	225	191	181	210	185	219	194
Delta States	201	220	223	224	164	196	277	237
Southern Plains	315	449	305	340	324	325	356	529
Mountain	1,329	1,064	934	1,009	1,380	1,051	977	1,891
Pacific	384	287	270	225	245	165	245	383
47 States	263	271	219	232	259	245	236	317
Price per acre								
Northeast	1,142	1,237	1,282	1,142	1,182	1,248	1,658	1,768
Lake States	1,257	1,329	1,201	1,119	945	806	666	644
Corn Belt	2,006	1,819	1,468	1,459	1,187	944	870	955
Northern Plains	565	536	505	525	408	265	265	260
Appalachia	1,096	1,078	987	1,151	981	984	961	951
Southeast	1,080	1,130	1,118	1,234	935	1,064	1,037	1,253
Delta States	1,224	1,351	1,226	1,120	924	793	662	527
Southern Plains	581	528	678	647	598	792	448	321
Mountain	290	382	382	364	306	274	273	160
Pacific	1,429	1,973	1,693	2,211	1,856	2,079	1,447	1,310
47 States	886	919	858	888	747	725	607	566

1/ Reported acres and prices for each State are weighted to regional and U.S. averages according to the State's acreage of land in farms. Arizona is excluded from averages for the Mountain region and the 47 States. Based on reported sales during the 5 months ending March 1, 1981-85 and the 5 months ending February 1, 1986-88.

Figure 6

## Distribution of Probable Use of Property 5 Years After Purchase, by Region, 1988



Respondents indicated that they expect about 91 percent of the farmland recently sold to remain in agriculture within the next 5 years, while they expect 1 percent to be used in forestry, and nearly 8 percent in other uses which include recreational areas, housing, and commercial/industrial uses (figure 6). Percentages of farmland likely to remain in agriculture were highest in the Lake States, Corn Belt, Northern Plains, Mountain, and Pacific regions. "Other uses" were reported to be relatively important in the Northeast, Appalachia, and the Southeast.

Farmland expected to remain in agriculture averaged 329 acres per sale and \$458 per acre at the U.S. level (table 12). Acres and prices varied widely among regions. Farmland expected to be in other uses averaged 192 acres per sale and \$1,046 per acre.

#### Tenure Before and After Sale

Information on the tenure of individuals in the reported sales indicates a shift from tenant-operated land to owner-operated land. Prior to sale, one-third of the land sold was operated by tenants, compared with only 13

percent after the sale, while 54 percent of the land was owner-operated prior to sale and 75 percent after sale. Seven percent of the land was not farmed prior to sale, and 5 percent was expected to not be farmed after the sale.

The increasing significance of owner-operators is evident when the acreages associated with each tenure group before and after sale are cross-tabulated (table 13). About 79 percent of the acreage operated by owners prior to sale is expected to be operated by owners after the sale, while 9 percent of the previously owner-operated acreage is expected to be farmed by hired managers, 10 percent by tenants, and 2 percent not farmed. Around 77 percent of the tenant-operated land prior to sale is expected to be operated by owners after the sale. Over half the acreage not farmed before sale is expected to be owner-operated after the sale. Thirty-six percent of the acreage not farmed before sale is expected to continue to be not farmed following the sale. The shift to owner-operated land was strongest in the Southern Plains, Mountain, and Pacific regions and least evident in the Southeast and Delta States where a high proportion of farmland is rented.

Table 12.--Farmland transfers: Average acres per sale and price per acre by probable use of property 5 years after purchase, by region, 1986-88

Region	Agriculture			Forestry			Other 2/		
	1986	1987	1988	1986	1987	1988	1986	1987	1988
Acres per sale									
Northeast	148	153	139	*	*	*	108	105	137
Lake States	130	148	149	*	111	96	71	90	82
Corn Belt	131	137	144	131	99	129	90	117	117
Northern Plains	394	324	410	*	*	*	329	283	255
Appalachia	133	146	120	111	107	123	105	104	98
Southeast	190	254	197	209	228	281	138	152	164
Delta States	230	291	260	119	114	150	101	373	124
Southern Plains	348	412	522	*	*	*	240	167	590
Mountain	1,023	1,005	1,892	*	*	*	739	892	722
Pacific	164	243	400	*	*	*	210	311	204
48 States	260	252	329	152	168	185	161	182	192
Price per acre									
Northeast	1,111	1,292	1,435	*	*	*	1,986	2,864	4,383
Lake States	822	650	661	*	331	390	730	594	633
Corn Belt	925	890	918	575	438	645	772	713	833
Northern Plains	254	260	228	*	*	*	259	261	294
Appalachia	955	848	850	371	424	485	1,083	1,159	1,171
Southeast	688	930	1,174	513	492	491	1,173	1,657	1,217
Delta States	767	691	534	475	361	455	839	417	661
Southern Plains	483	380	309	*	*	*	1,780	1,045	376
Mountain	277	257	151	*	*	*	650	379	191
Pacific	2,281	1,552	899	*	*	*	1,140	1,254	3,414
48 States	580	599	458	483	476	505	1,095	1,005	1,046

\* = Insufficient information or none reported.

1/ Based on reported sales during the 5 months ending February 1, 1986-88. 2/ Includes uses for recreation, rural residences, residential subdivisions, and commercial/industrial purposes.

Table 13.--Cross-tabulations between tenancy before and after sale, in percent of acres sold, 1988 1/

Person farming before sale	Person farming after sale				
	Owner	Hired manager	Tenant	Not farmed	Total
Percent					
Owner	79	9	10	2	100
Hired manager	58	29	12	1	100
Tenant	77	3	18	2	100
Not farmed	54	5	5	36	100

1/ Based on reported sales during the 5 months ending February 1, 1988.

## Fewer Sales Financed

The trend toward fewer sales being financed in the 1980's continued into 1988 as about 70 percent of all reported sales involved financing, down from 73 percent last year and down from around 90 percent in the 1970's (table 14). The percentage financed in 1988 is comparable with mid-1960 levels. Cash sales are occurring more frequently, particularly in the Corn Belt. Over 90 percent of the Corn Belt sales in the late 1970's and early 1980's involved financing, compared with only 67 percent in 1988. The percentage drop was even larger in the Northern Plains where 94 percent of the sales were financed in 1980 and only 62 percent in 1988. The proportion of credit-financed sales remains highest in the Northeast and Lake States (78 percent) and in the Mountain region (76 percent).

The amount of debt as a percent of purchase price averaged 72 percent in 1988,

compared with 77 percent a year earlier (table 15). This represents the first significant drop in several years and brings the share financed in line with that in the mid-1960's. Percentages were lower in nearly all regions during 1987-88, especially in the Northeast, Southeast, and Pacific region. Debt percentages remain highest in the Delta States and Southern Plains, averaging around 80 percent.

## More Financing by Commercial Banks

Commercial banks are providing a larger share of financing in the 1980's. They supplied nearly one-third of all credit extended for reported sales in 1988, up from 28 percent a year earlier and 4 percent during 1980-82 (table 16). Commercial banks were the most frequent sources of financing in the Corn Belt (54 percent), Appalachia (47 percent), and the Southeast (44 percent), but seldom used in the

Table 14.--Credit-financed farmland transfers: Percentage of transfers on which debt was incurred, by region, 1975-88 1/

Year	North-east	Lake States	Corn Belt	Northern Plains	Appalachia	South-east	Delta States	Southern Plains	Mountain	Pacific	U.S.
Percent											
1975	87	91	89	88	86	88	83	87	87	86	85
1976	90	88	88	84	84	84	83	81	90	87	87
1977	85	94	91	89	86	85	81	87	88	89	88
1978	90	93	91	90	85	87	85	86	88	89	89
1979	91	95	93	92	87	86	85	87	91	92	90
1980	93	95	93	94	88	86	87	88	93	92	91
1981	89	95	93	93	86	86	85	80	88	91	90
1982	88	94	91	91	83	85	83	85	89	92	89
1983	86	91	85	85	80	82	85	80	84	88	84
1984	84	90	85	85	78	82	82	81	88	89	81
1985	85	87	77	78	81	82	83	81	85	86	82
1986	82	83	72	69	75	74	82	76	78	78	76
1987	76	79	70	64	76	72	76	68	71	75	73
1988	78	78	67	62	72	63	74	68	76	73	70

1/ Based on reported sales during the 5 months ending March 1, 1975-85 and the 5 months ending February 1, 1986-88.

Table 15.--Credit-financed farmland transfers: Debt as a percent of purchase price, by region, 1975-88 1/

Year	North-east	Lake States	Corn Belt	Northern Plains	Appalachia	South-east	Delta States	Southern Plains	Mountain	Pacific	U.S.
Percent											
1975	76	77	76	78	78	83	74	77	74	74	76
1976	76	78	76	74	78	80	66	75	73	76	76
1977	77	79	77	80	78	80	76	75	75	75	77
1978	76	78	76	81	81	82	80	72	70	73	76
1979	80	81	80	82	81	82	50	78	77	72	79
1980	80	82	79	83	81	79	87	63	75	71	78
1981	78	83	79	81	83	80	50	80	69	73	78
1982	77	82	78	81	78	78	82	76	74	70	77
1983	76	81	76	80	78	79	80	76	69	71	76
1984	80	81	78	76	80	76	87	76	73	73	77
1985	78	81	76	77	78	79	87	79	72	69	76
1986	77	77	73	79	81	83	65	82	72	71	77
1987	76	81	73	74	78	81	81	81	82	72	77
1988	68	77	70	75	75	74	80	79	61	68	72

1/ Blank = reported sales during the 5 months ending March 1, 1980-85 and the 5 months ending February 1, 1986-88.

Mountain region (6 percent) and the Pacific region (3 percent).

While seller financing still accounted for nearly one-fourth of all financing in 1988, its importance is much less than in the early 1980's when land values were high, and sellers were willing and able to provide around 40 percent of the financing. Seller financing is currently used most often in the Lake States (39 percent), Mountain States (33 percent), and the Pacific region (39 percent).

Federal land banks provided 25 percent of the financing in 1988, considerably less than their 35-percent share in the early 1980's. Lower shares in recent years have partly stemmed from financial difficulties in some banks. The banks remain major sources of financing in the Northern Plains (34 percent), Delta States (40 percent), Southern Plains (39 percent), and the Mountain region (35 percent).

#### RECENT UPDATES IN LAND VALUES

Results of a May 1, 1988 national survey of rural appraisers provide further evidence of renewed confidence in the farmland market. The estimated increase in nationwide values during February-April 1988 averaged 1.8 percent, substantially above appraisers' expected increase of 0.5 percent during November 1987-January 1988 (table 17). Just

Figure 7  
Regions In National Survey of Farm Appraisers



over half of all respondents in the May survey reported higher values during the preceding 3 months, while 40 percent thought values were unchanged. Strongest support for higher values was in the Northeast and North Central regions (fig. 7). Market conditions remain less favorable in the West where two-thirds of the appraisers reported values were unchanged, and nearly 10 percent thought values were lower. Appraisers in the South were less certain of market directions.

Appraisers expect U.S. values to increase about 1 percent during the May-July 1988. When looking ahead 12 months, appraisers expect U.S. land values to increase around 3.5

Table 16.--Credit-financed farmland transfers: Percentage of credit volume extended, by type of lender, and region, 1980-88 1/

Regions and type of lender	1980	1981	1982	1983	1984	1985	1986	1987	1988
Percent									
Northeast									
Sellers	35	38	38	29	29	32	28	31	27
Commercial banks	10	6	6	9	16	17	24	27	36
Insurance companies	1	*	*	1	1	*	*	2	*
Federal land banks	33	34	35	39	27	23	20	19	24
Others	21	22	21	22	27	27	28	20	12
Lake States									
Sellers	55	59	60	44	44	49	53	41	39
Commercial banks	3	2	4	6	10	12	16	30	31
Insurance companies	3	1	1	1	3	1	1	*	*
Federal land banks	28	28	25	38	32	24	17	18	20
Others	11	10	10	11	11	15	13	10	10
Corn Belt									
Sellers	34	38	37	37	32	27	30	20	17
Commercial banks	3	4	4	10	15	16	38	45	54
Insurance companies	8	4	5	5	*	8	3	7	2
Federal land banks	42	44	44	37	36	33	16	15	15
Others	12	10	10	10	13	16	12	13	12
Northern Plains									
Sellers	41	44	35	32	27	25	49	24	19
Commercial banks	2	3	4	4	7	14	20	36	33
Insurance companies	*	3	3	2	4	4	10	2	3
Federal land banks	36	34	39	42	43	39	14	23	34
Others	16	16	19	21	20	19	7	14	11
Appalachia									
Sellers	24	21	27	17	17	26	27	15	18
Commercial banks	10	9	12	20	27	25	35	54	47
Insurance companies	3	2	2	4	1	1	*	1	1
Federal land banks	38	42	38	33	33	25	18	13	21
Others	24	26	21	26	24	23	20	16	14
Southeast									
Sellers	25	25	14	17	24	22	24	35	25
Commercial banks	4	3	5	19	9	10	16	23	44
Insurance companies	7	1	3	1	7	1	2	12	7
Federal land banks	47	46	63	50	41	43	34	17	16
Others	17	25	15	12	20	23	23	12	9
Delta States									
Sellers	19	20	15	13	19	15	9	19	7
Commercial banks	5	6	5	15	14	18	27	22	25
Insurance companies	15	3	15	3	3	9	10	3	7
Federal land banks	37	47	44	42	38	29	34	12	40
Others	24	24	21	26	27	30	19	44	21
Southern Plains									
Sellers	30	43	43	31	23	24	30	15	14
Commercial banks	4	7	5	9	13	11	13	23	26
Insurance companies	17	6	1	9	3	3	18	9	*
Federal land banks	21	29	34	27	37	35	25	24	39
Others	28	15	17	25	23	28	14	29	21
Mountain									
Sellers	60	46	56	41	22	50	42	52	33
Commercial banks	1	1	1	2	3	3	3	*	6
Insurance companies	8	9	5	7	18	1	1	2	7
Federal land banks	19	35	27	35	37	29	27	26	35
Others	12	9	10	15	20	17	26	11	19
Pacific									
Sellers	54	49	56	52	30	39	31	30	39
Commercial banks	2	4	1	2	6	7	9	12	3
Insurance companies	3	10	6	1	17	5	1	21	19
Federal land banks	29	31	26	31	*	32	49	24	22
Others	13	6	11	13	9	17	10	12	18
48 States									
Sellers	38	40	41	33	28	33	32	30	24
Commercial banks	4	4	4	9	11	13	21	28	32
Insurance companies	7	*	4	*	7	3	5	7	5
Federal land banks	34	37	37	37	36	31	25	19	25
Others	17	15	14	16	18	20	17	16	14

\* = Less than 0.5 percent

1/ Based on reported sales during the 5 months ending March 1, 1980-85 and the 5 months ending February 1, 1986-88.

Table 17.--Changes in land values, as reported by rural appraisers  
on May 1, 1988 and November 1, 1987 1/

	Northeast	North Central	South	West	Total					
	Percent									
<u>May 1, 1988</u>										
Percent reporting values during Feb. 1-April 30 have:										
Increased	50	69	32	24	51					
Remained the same	20	31	42	66	40					
Decreased	--	--	26	9	9					
Change in value					1.8					
Percent expecting values during May 1-July 31 to:										
Increase	100	37	26	33	48					
Remain the same	--	63	50	61	45					
Decrease	--	--	23	6	8					
Change in value					1.0					
Percent expecting values during May 1, 1988- May 1, 1989 to:										
Increase	99	77	50	61	71					
Remain the same	1	22	32	32	22					
Decrease	--	1	18	7	7					
Change in value					3.6					
<u>November 1, 1987</u>										
Percent reporting values during Aug. 1-Oct. 31, 1987 have:										
Increased	76	44	12	16	37					
Remained the same	24	55	76	61	54					
Decreased	--	1	12	23	9					
Change in value					1.8					
Percent expecting values during Nov. 1, 1987-Jan. 31, 1988 to:										
Increase	50	35	15	10	34					
Remain the same	19	64	63	81	57					
Decrease	1	1	22	9	9					
Change in value					0.5					
Percent expecting values during Nov. 1, 1987-Nov. 1, 1988 to:										
Increase	99	53	53	49	63					
Remain the same	--	37	22	25	21					
Decrease	1	10	25	26	16					
Change in value					2.3					

1/ Based on about 625 responses in a national survey of accredited  
rural appraisers.

percent during May 1988–May 1989. Land values are expected to strengthen significantly in the West, while improvements in the South are expected to proceed more slowly.

Results of the first quarter survey of agricultural bankers in the Federal Reserve Bank of Chicago district (Iowa, northern portions of Illinois and Indiana, southern Wisconsin, and Michigan) indicated that the value of "good" farmland increased 4 percent during January–March 1988. This increase was up from the 3-percent growth during October–December 1987. Illinois values, as of April 1, 1988, were particularly higher than on January 1, 1988, while values in other portions of the district continued unchanged to slightly higher. District values have increased for 5 consecutive quarters.

The Federal Reserve Bank of Kansas City (Kansas, Nebraska, Oklahoma, Wyoming, Colorado, northern New Mexico, and western Missouri) reported a 2.6-percent increase in nonirrigated cropland values during January–March 1988. Values for irrigated cropland and ranch land were 2.2 and 4.4 percent higher, respectively. Gains were strongest in Nebraska and Oklahoma, while values in the Mountain States (Colorado, Wyoming, and New Mexico) continued downward.

Land values in the Federal Reserve Bank of Minneapolis district were also higher. As of March 31, 1988, the value of nonirrigated cropland averaged 5.5 percent above a year ago, and the value of grazing land was 2.5 percent higher. These increases are improvements from the December 31, 1987, survey when rural bankers reported that values of nonirrigated cropland increased 2.1 percent in the preceding 12 months, and pasture decreased 0.2 percent. Percentage increases through the first quarter were highest in Minnesota and South Dakota with the rest of the district—Montana, North Dakota, northwestern Wisconsin, and the Upper Peninsula of Michigan—showing limited increases or modest declines.

The Federal Reserve Bank of Dallas (Texas, southern New Mexico, and northern Louisiana) reported a slight improvement in values of dryland cropland during the first quarter of 1988. (Values are based on a 3-quarter moving average.) Values for irrigated cropland and ranch land continued to decline, but at a slower rate than in preceding quarters. Texas values for dryland and irrigated cropland were slightly higher.

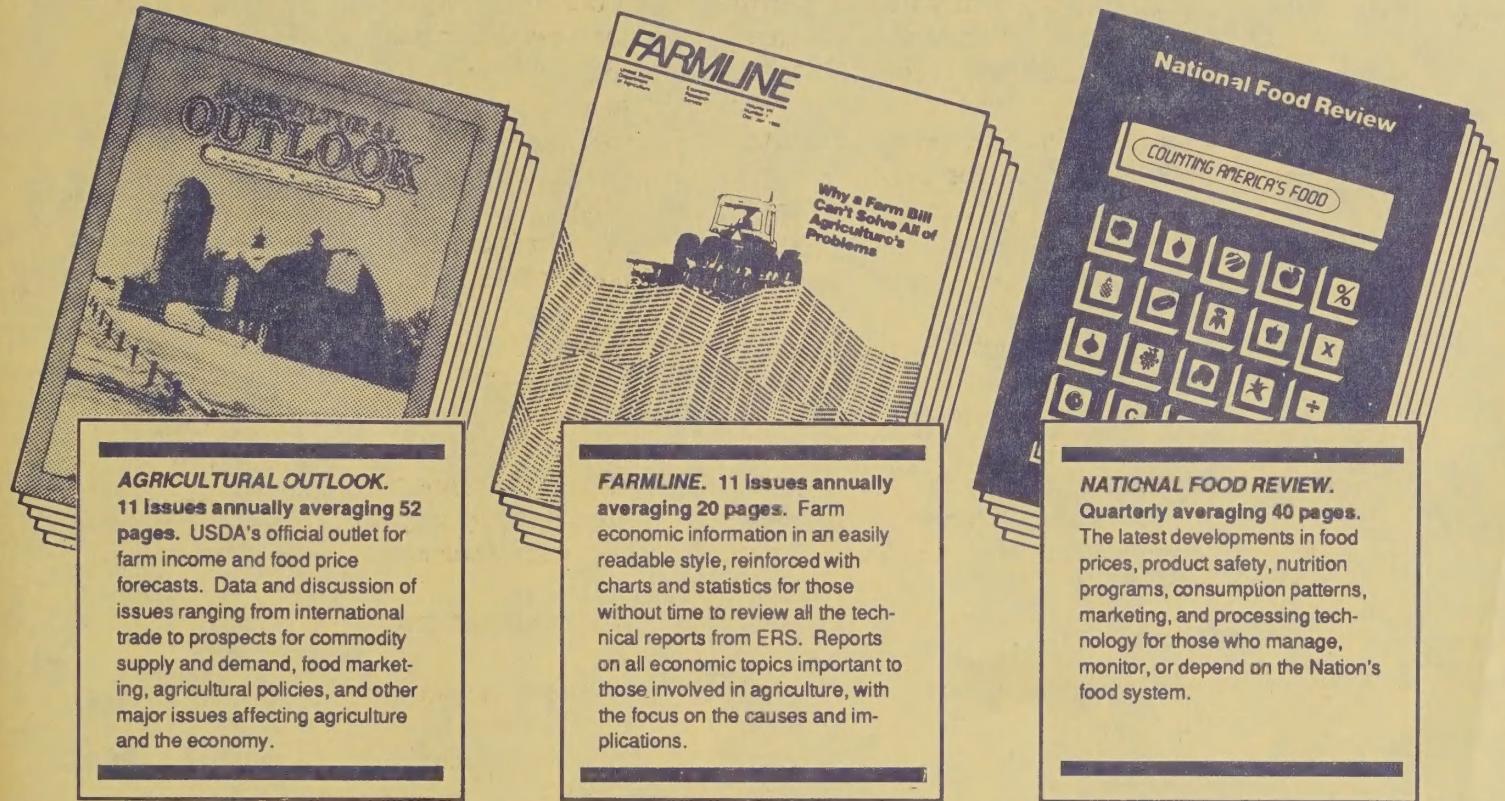
## LIST OF TABLES

### Page      Table

6	1.	Average per acre value of farmland and buildings, by State, 1982-88
7	2.	Total value of farmland and buildings, by State, 1982-88
8	3.	Total value of farm buildings, by State, 1982-88
9	4.	Average per farm value of farmland and buildings, by State, 1982-88
15	5.	Farms rented for cash: Average gross cash rent per acre and rent as a percent of value, selected States, 1985-88
16	6.	Cropland rented for cash: Average gross cash rent per acre and rent as a percent of value, selected States, 1985-88
17	7.	Pasture rented for cash: Average gross cash rent per acre and rent as a percent of value, selected States, 1985-88
18	8.	Cattle grazing rates on privately owned nonirrigated land, 1985-87
20	9.	Farmland buyers: Percentage of purchases, acres, and value by type of buyer, 1986-88
21	10.	Farmland sellers: Percentage of sales, acres, and value by type of seller, 1986-88
22	11.	Farmland transfers: Average acres per sale and price per acre, by region, 1981-88
24	12.	Farmland transfers: Average acres per sale and price per acre by probable use of property 5 years after purchase, by region, 1986-88
24	13.	Cross-tabulations between tenancy before and after sale, in percent of acres sold, 1988
25	14.	Credit-financed farmland transfers: Percentage of transfers on which debt was incurred, by region, 1975-88
26	15.	Credit-financed farmland transfers: Debt as a percent of purchase price, by region, 1975-88
27	16.	Credit-financed farmland transfers: Percentage of credit volume extended, by type of lender, and region, 1980-88
28	17.	Changes in land values, as reported by rural appraisers on May 1, 1988 and November 1, 1987

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